PLANNING PROPOSAL

Minimum subdivision lot size changes

'Ettamogah Rise Estate', Springdale Heights
(Lot 250 DP1218522 and Lot 102 DP1120977)

***Albury Local Environmental Plan 2010* and**
Albury Development Control Plan 2010

September 2019

Prepared by:

Blueprint Planning

For:

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STATEMENT

This Planning Proposal relates to:	amendment of the subdivision Minimum Lot Size that applies to part of the 'Ettamogah Rise Estate', Springdale Heights (Lot 250 DP1218522 and Lot 102 DP1120977) including: • part change in lot size from 4,000 square metres to 1,500 square metres, and • consequential corrections and changes to the Minimum Lot Size Map, under the *Albury Local Environmental Plan 2010.*
This Planning Proposal has been prepared in accordance with:	• section 3.33 of the *Environmental Planning and Assessment Act 1979*; • *A guide to preparing planning proposals* (Department of Planning and Environment, 2016); and • *A guide to preparing local environmental plans* (Department of Planning and Environment, 2016).
This report has been prepared by:	Daris Olsauskas *BUrbRegPlan (NE), MPIA, RPIA* James Laycock *BUrbRegPlan (NE), MBA (CS), MPIA, RPIA* Blueprint Planning 3/576 Kiewa Street ALBURY NSW 2640

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Document Control

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	4	18/12/18	Draft to Council	JL
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	6	30/09/19	Final to Council for Gateway Determination	JL

EXECUTIVE SUMMARY

This Planning Proposal relates to land located at 'Ettamogah Rise Estate', Springdale Heights NSW.

This report has been prepared in support of a change to the Minimum Lot Size provisions applying to part of the above land from 4,000m^2 to 1,500m^2 under the *Albury Local Environmental Plan 2010* (LEP) with changes to the LEP's Lot Size Map in specifically identified areas as well as consequential corrections and amendments to reflect past approvals applying to the land.

The objective or intended outcome of these changes is to enable the land to be further developed for low density residential purposes with a range of lots sizes.

This report has been prepared in accordance with:

- section 3.33 of the *Environmental Planning and Assessment Act 1979*;
- *A guide to preparing planning proposals* (Department of Planning and Environment, 2016);
- *A guide to preparing local environmental plans* (Department of Planning and Environment, 2016); and
- *Planning Circular PS 16-005 Delegation of plan making decisions* (Department of Planning and Environment, 2016).

Consideration of the Planning Proposal against the above requirements and guidelines demonstrates that alteration to the minimum lot size applying to the land is appropriate as:

- the proposed lot size of 1,500m^2 represents an orderly response to the existing approved residential subdivision pattern and development of the land;
- the reduction in lot size in certain locations is consistent with the objectives of the R2 Low Density Residential Zone and environmental considerations applying to the land, and
- the amendment as proposed is consistent with relevant strategies, State environmental planning policies, and Ministerial planning directions.

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GLOSSARY

Land	part Lot 250 DP1218522 and part Lot 102 DP1120977 – 'Ettamogah Rise Estate', Springdale Heights subject to the Planning Proposal
Planning Proposal	amendment of the subdivision Minimum Lot Size applying to the Land from 4,000m^2 to 1,500m^2 under the LEP with consequential changes to the LEP Minimum Lot Size Map including corrections to align with past approvals applying to the Land
Council; ACC	Albury City Council
DCP	*Albury Development Control Plan 2010*
EP&A Act	*Environmental Planning and Assessment Act 1979*
ESD	ecologically sustainable development
LEP	*Albury Local Environmental Plan 2010*
LGA	local government area
Proponent	Trustees of the Roman Catholic Church for the Diocese of Wagga Wagga
SEPP	State Environmental Planning Policy

1.0 INTRODUCTION

1.1 Preliminary

This report contains word abbreviations and terms listed in the Glossary in the **Table of Contents** section above.

This report has been prepared in support of a request by the Proponent to Council to amend the Minimum Lot Size provisions applying to specific R2 Low Density Residential Zone areas within the Land from 4,000m^2 to 1,500m^2 under the LEP. This amendment will also allow for correction of Minimum Lot Size map boundaries consistent with past development consent approvals applying to the Land.

1.2 Scope

This Planning Proposal has been prepared in accordance with the legislative and guideline requirements listed in the **Statement** at the beginning of this report, and have been prepared by Blueprint Planning on behalf of the Proponent pursuant to *A guide to preparing local environmental plans* (Department of Planning and Environment, 2016, p. 4).

1.3 Land and context description

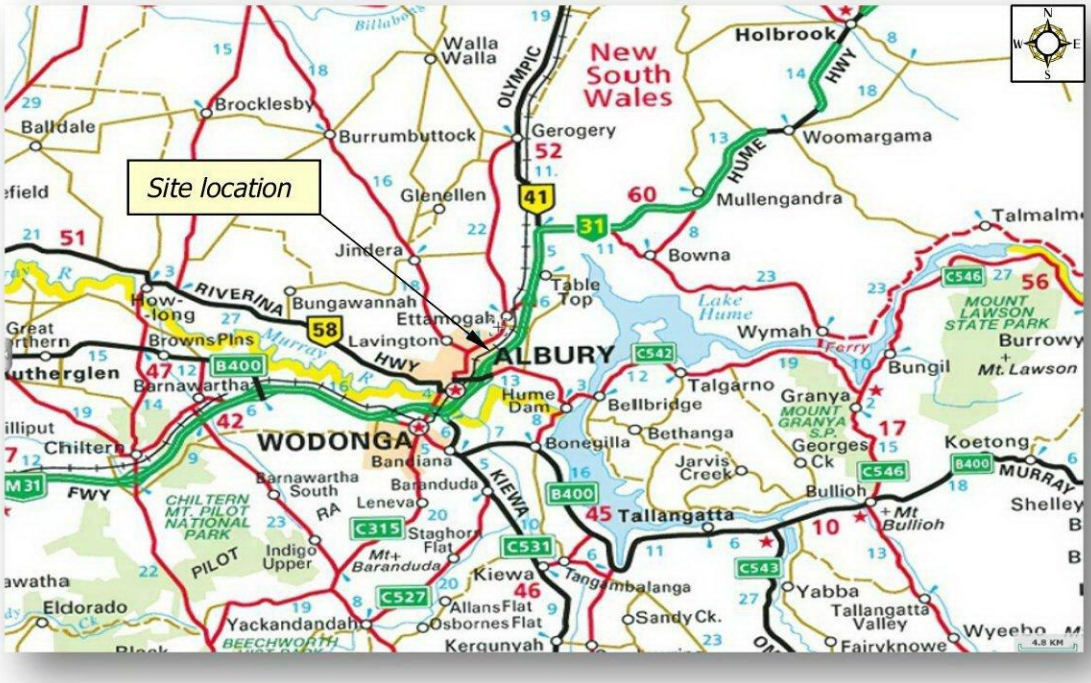
The Land is located approximately 5.1 kilometres to the northeast of the 'Lavington five-ways road intersection' with access from Wagga Road and Central Reserve Road, Ettamogah and Springdale Heights; and is described as part Lot 250 DP1218522 and part Lot 102 DP1120977 and is otherwise known as 'Ettamogah Rise Estate'.

The registered Title diagrams for the Land are shown in **Appendix A: Title diagrams**.

The location of the Land is shown locally in **Figure 1: Location plan** and in an aerial photograph is shown in **Figure 2: Aerial photograph of the Land**.

The existing zoning and the minimum lot size applying to the Land overlaid on current subdivision approvals applying to the Land are shown in **Figure 3: Land Zoning Map (existing)** and **Figure 4: Minimum Lot Size Map (existing)**.

Figure 1: Location plan



Source: Street Directory (2019).

ETTAMOGAH RISE
DA PLANS
STAGES 6–9

EXISTING CONDITIONS PLAN
AERIAL UNDERLAY

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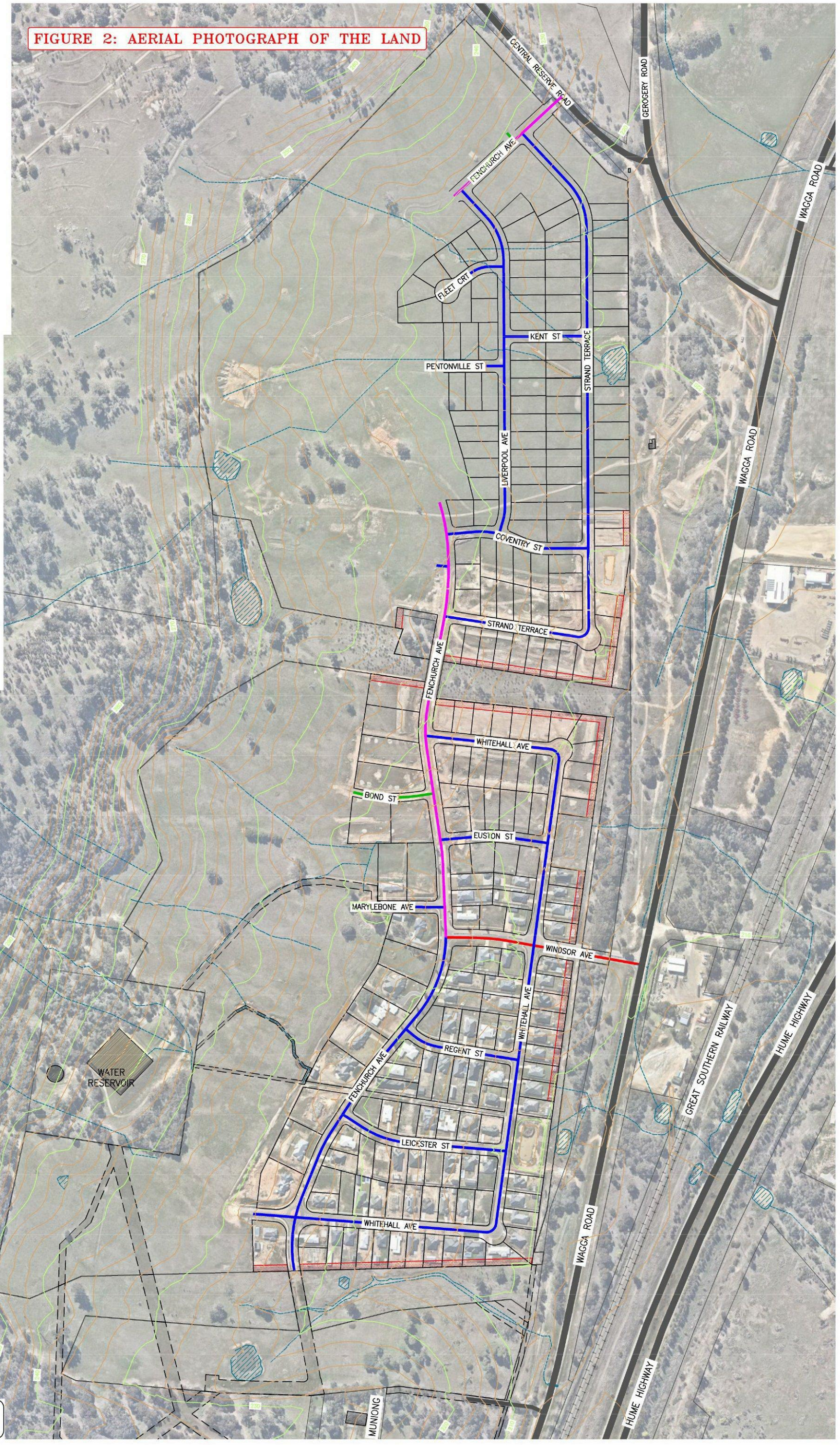
FIGURE 2: AERIAL PHOTOGRAPH OF THE LAND



ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT ZONING MAP LZN_006
CURRENT ZONE BOUNDARY

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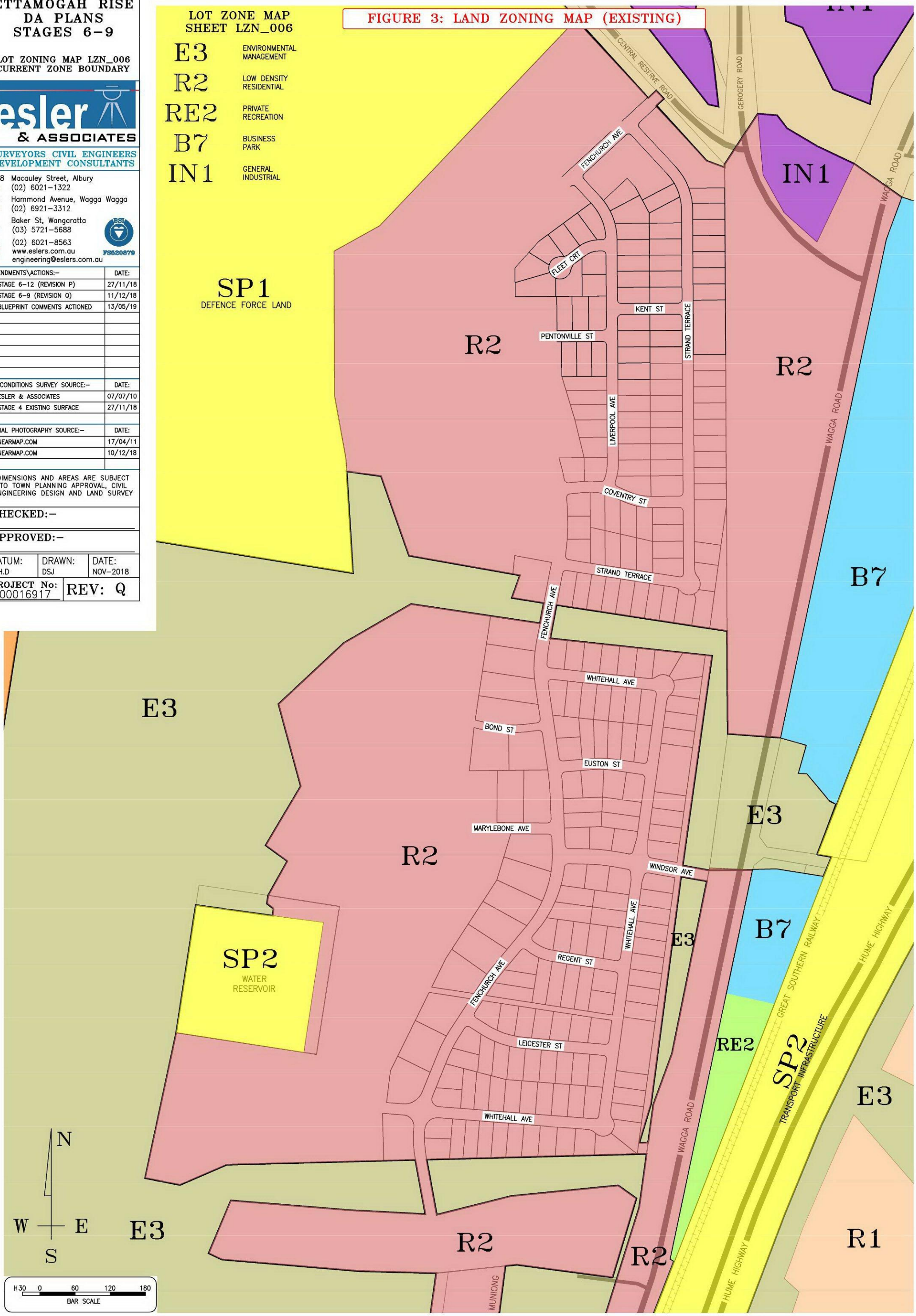
FIGURE 3: LAND ZONING MAP (EXISTING)

LOT ZONE MAP
SHEET LZN_006

- E3 ENVIRONMENTAL MANAGEMENT
- R2 LOW DENSITY RESIDENTIAL
- RE2 PRIVATE RECREATION
- B7 BUSINESS PARK
- IN1 GENERAL INDUSTRIAL

SP1 DEFENCE FORCE LAND



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ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT SIZE MAP LSZ_006
CURRENT ZONE BOUNDARY

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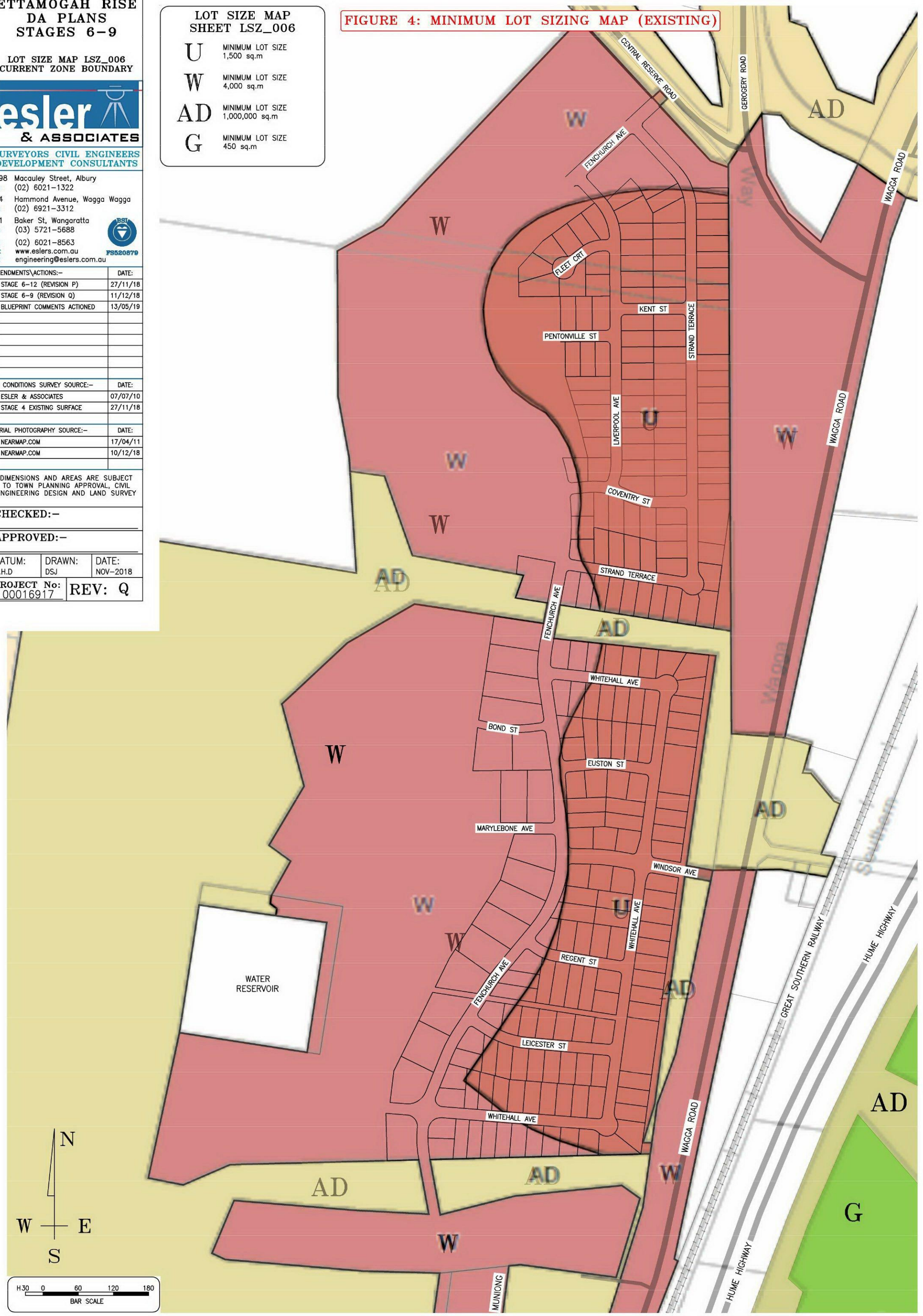
LOT SIZE MAP SHEET LSZ_006

U	MINIMUM LOT SIZE 1,500 sq.m
W	MINIMUM LOT SIZE 4,000 sq.m
AD	MINIMUM LOT SIZE 1,000,000 sq.m
G	MINIMUM LOT SIZE 450 sq.m

FIGURE 4: MINIMUM LOT SIZING MAP (EXISTING)



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2.0 OBJECTIVES OR INTENDED OUTCOMES

The objective of the Planning Proposal is to facilitate amendment of the Minimum Lot Size Map applying to part of the Land under the LEP to facilitate:

- flexibility in minimum lot sizes in specific areas reflecting detailed ongoing subdivision design investigations, and
- corrections to Minimum Lot Size map boundaries to account for Development Consent No. 10.2012.32005.4, and
- the necessary changes to minimum lot sizes to achieve the objectives of the R2 Low Density Residential Zone.

The corrections and changes to the Minimum Lot Size provisions applying to the Land have been overlaid on an indicative concept subdivision plan for the Land. This indicative concept plan has been specifically prepared to demonstrate the nature of the intended alterations and corrections as well as their effect on future development options for the Land. This also coincides with the staging of development that has been previously approved by Council across the Land.

The indicative concept plan identifies an increase in 27 lots which is subject to final Council approval at the development application stage. This is an outcome of the objectives of the Planning Proposal as identified above and reflects the proposed adjustments in Minimum Lot Size to specific areas of the Land, generally to the west of Fenchurch Ave, and the response to existing known development design parameters such as road layouts, services and environmental constraints. The subsequent increase in lots is not significant considering the overall development of the land.

The indicative concept plan also provides guidance to the corrections and amendments proposed to account for approved development layouts on the Land. This indicative concept plan of subdivision reflects a logical road hierarchy across the Land.

A plan showing the extent of the corrections and adjustments to the 1,500m^2 Minimum Lot Size applying to the Land is shown in **Figure 5: Proposed Minimum Lot Size changes and corrections**.

3.0 EXPLANATION OF PROVISIONS

The objectives or intended outcomes mentioned in **Section 2.0: Objectives or intended outcomes** are to be achieved by amending the LEP as shown in **Table 1: Summary of LEP amendments** and **Figure 6: Minimum Lot Size Map (proposed)**.

Table 1: Summary of LEP amendments

LEP map proposed to be amended	*Effect of proposed amendment*
Lot Size Map – Sheet LSZ_006	Amend the Minimum Lot Size development standard that applies to part of the Land from 4,000m^2 to 1,500m^2.

ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LOT SIZE MAP LSZ_006
AMENDMENT AREA ONLY

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LOT SIZE MAP
SHEET LSZ_006

U	MINIMUM LOT SIZE 1,500 sq.m
W	MINIMUM LOT SIZE 4,000 sq.m
AD	MINIMUM LOT SIZE 1,000,000 sq.m
G	MINIMUM LOT SIZE 450 sq.m

FIGURE 5: PROPOSED MINIMUM LOT SIZE CHANGE AND CORRECTIONS

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LOT SIZE MAP LSZ_006
FINAL ZONE BOUNDARY

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U	MINIMUM LOT SIZE 1,500 sq.m
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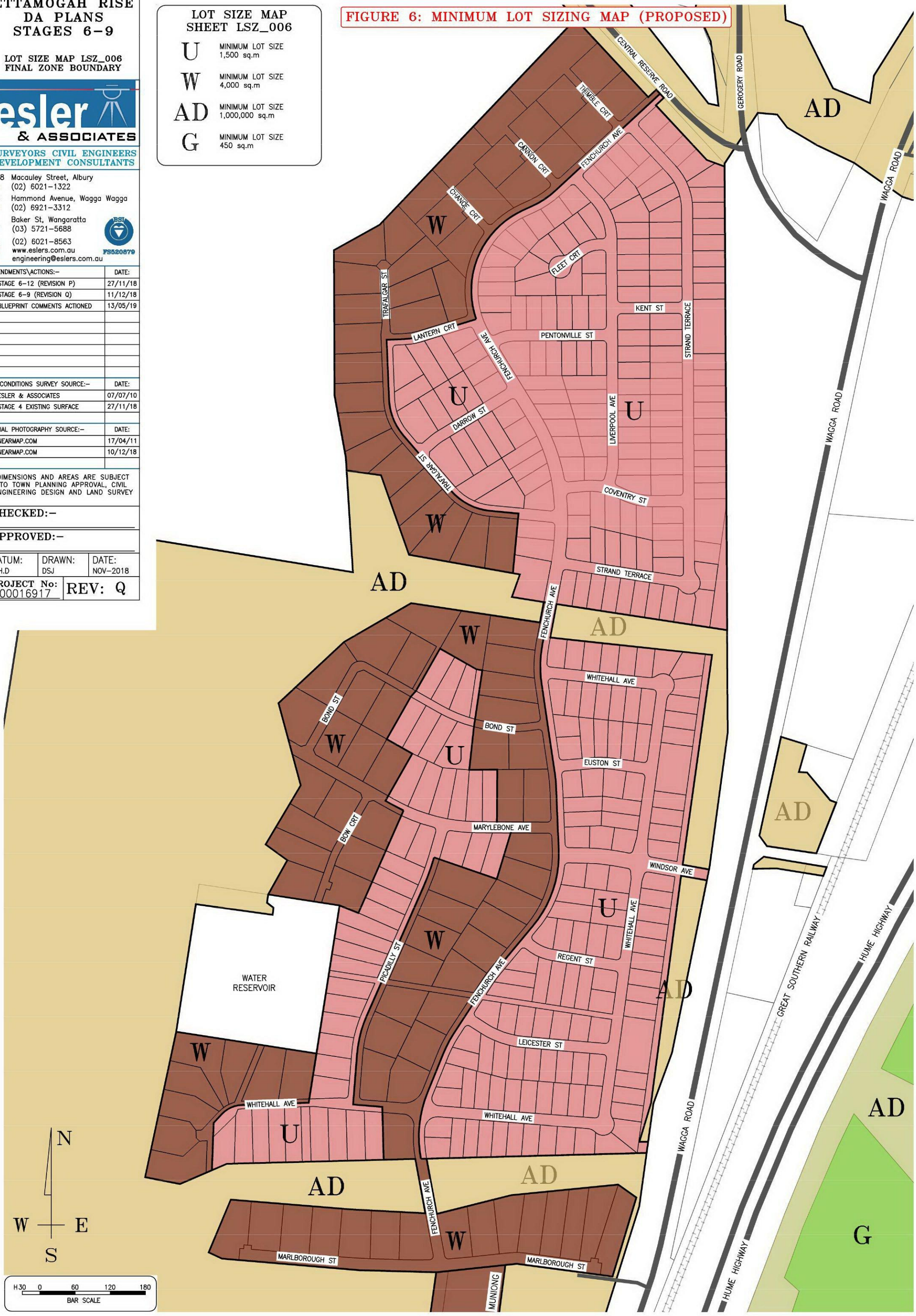
FIGURE 6: MINIMUM LOT SIZING MAP (PROPOSED)



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4.0 JUSTIFICATION

4.1 Need for the planning proposal

4.1.1 Is the planning proposal a result of any strategic study or report?

The Planning Proposal is not a result of a specific strategic study or report.

The Land was compulsory acquired from private ownership by the then Albury-Wodonga Development Corporation (AWDC) in the mid-1970s under the Commonwealth *Albury-Wodonga Development Act 1973*.

The Land was rezoned from 'rural' to 'residential' in 2005 following the preparation of a Local Environmental Study in 2001 (*Albury-Wodonga Development Corporation – Ettamogah Environmental Study*, Habitat Planning, 2001) under the then *Albury Local Environmental Plan 2000*.

The Land was then rezoned from 'residential' to 'low density residential' in 2010 following the preparation of the *Albury Land Use St*rategy in 2007 (GHD) and the *Ettamogah Outline Development Plan* (Ettamogah ODP), which was incorporated into the current *Albury Local Environmental Plan 2010* (LEP) and the *Albury Development Control Plan 2010* (DCP).

Specifically the *Albury Land Use Strategy* in 2007 supported this planning process (Section 12.1 *Implementation*, p. 92) –

> *The strategic directions specified in this strategy are translated into statutory provisions through the development of a LEP/DCP framework. The LEP and DCP provide the means of ensuring the development of Albury is consistent with the long-term land use vision and objectives identified for Albury.*

Development Consent 10.2012.32005.1 was issued on the 29 October 2013 for the subdivision of the Land in eight stages (Stages 2-9) comprising a total of 343 lots. A copy of this development consent (as modified) is included in **Appendix B: Development Consent No 10.2012.32005.4**.

Of the 343 originally approved lots – 135 lots were 4,000m^2 minimum lot size lots and 208 lots were 1,500m^2 minimum lot size lots.

Development Consent No. 10.2012.32005.4 includes a variation to the 4,000m^2 minimum lot size "development standard" under LEP clause 4.6: *Exceptions to development standards* in regard to varying clause 4.1: *Minimum subdivision lot size*. This variation was required for 53 of the approved lots to allow for flexibility in subdivision to a minimum of 1,500m^2. This variation also reflected the refinement of

subdivision design investigations that were not available at the time of preparation of the Minimum Lot Size Map in the LEP.

This Planning Proposal arises from an opportunity to correct and more appropriately refine Minimum Lot Size Map boundaries for future subdivision stages that reflect detailed site analysis and design investigations. This is consistent with the relevant opportunities and constraints identified in the original Local Environmental Study (*Albury-Wodonga Development Corporation – Ettamogah Environmental Study*, Habitat Planning, 2001), relevant development guidelines set out in Appendix E of the DCP (including the Ettamogah Outline Development Plan), and the 'objectives' of the R2 Low Density Residential Zone under the LEP.

4.1.2 Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Amending the minimum subdivision lot size of 4,000m^2 to 1,500m^2 in specific locations as detailed in **Table 1: Summary of LEP amendments** is considered the best means of achieving the relevant objectives or intended outcomes mentioned in **Section 2.0: Objectives or intended outcomes**.

4.2 Relationship to strategic planning framework

4.2.1 Is the planning proposal consistent with the objectives and actions of the applicable regional, sub-regional or district plan or strategy (including any exhibited draft plans or strategies)?

The Planning Proposal is consistent with relevant objectives and actions of the *Riverina Murray Regional Plan 2036* (NSW Government, 2017) as set out in **Appendix D: Applicable goals and directions of the *Riverina Murray Regional Plan 2036***.

4.2.1.1 Strategic merit

- *Is the Planning Proposal consistent with the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, or corridor/precinct plans applying to the site, including any draft regional, district or corridor/precinct plans released for public comment?*

  The Planning Proposal is consistent with relevant goals and directions of the *Riverina Murray Regional Plan 2036* (NSW Government, 2017) as set out in

Appendix D: Applicable goals and directions of the *Riverina Murray Regional Plan 2036*.

There are no specific corridor/precinct plans applying to the Land, including any draft regional, district or corridor/precinct plans released for public comment.

- *Is the Planning Proposal consistent with a relevant local council strategy that has been endorsed by the Department?*

The Planning Proposal is consistent with Council's strategies including the *Thurgoona Threatened Species Conservation Strategy* (AWDC, 2004) and the *Albury Land Use Strategy* (GHD, 2007) which are incorporated into the LEP.

Specifically the *Albury Land Use Strategy* (GHD 2007) identifies in Section 10: *Living in Albury* that the Ettamogah Rise Estate is an important component of residential land supply and urban expansion to the north of the City. In Section 10.4 the Strategy also focuses on a range of matters including built form and urban densities. This Planning Proposal is consistent with the planning principles around built form and urban densities in Section 10.4 of the Strategy in that the Planning Proposal:

- provides for diversity in housing styles and lot sizes to accommodate a range of demands,
- maximises sustainable use of resources, including water, energy, transport and community services,
- retains public open space including areas identified for habitat protection and conservation,
- encourages road design that maintains a rural character in low density residential areas, and
- supports water sensitive urban design.

The ongoing role of the Strategy is to guide development forms that are consistent with the capability and suitability of the various identified expansion areas.

Both strategies identify Retained Habitat Network (RHN) areas as either the E2 Environmental Conservation Zone (for public land) or the E3 Environmental Management Zone (for private land), with the Land subject of this Planning Proposal being the only land zoned as R2 Low Density Residential Zone having been previously re-subdivided by the AWDC to excise E3 land for habitat network connectivity purposes.

The *Albury Land Use Strategy* (GHD, 2007) identifies the importance of local structure planning to clarify detailed local road and infrastructure networks, lot layouts, land use and urban form outcomes.

The Planning Proposal proposes a number of amendments of the Ettamogah Outline Development Plan to reflect the subsequent environmental outcomes of these strategies and development approvals applying to the Land where

relevant. These updates are contained in **Appendix E: Ettamogah Outline Development Plan (amended)**.

- *Does the Planning Proposal respond to a change in circumstances, such as the investment in new infrastructure or changing demographic trends that have not been recognised by existing planning controls?*

  The Planning Proposal partially responds to changing market demands as evidenced in the findings of the *Albury Development Monitor 2017-2018* (Albury City Council, 2018) which provides key statistics in relation to the production and consumption of vacant residential, rural residential, commercial and industrial land in the Albury municipality.

  The key findings of the Monitor (p. 8) which are relevant to this Planning Proposal is that vacant lots greater than 600m^2 and less than 1,500m^2 are the most popular lot sizes throughout the municipality. As evidenced in Stages 1 and 2 of 'Ettamogah Rise Estate', of the 97 lots created the 15 remaining vacant are mainly within the 4,000m^2 lot size land area classification.

  The reduction of minimum lot size in specific areas of the Land is unlikely to change land supply and demand characteristics for larger lot residential land across the municipality. The municipality currently has sufficient supply of larger lot residential land to meet future short and medium-term demands.

  The Planning Proposal includes amendment of the Ettamogah Outline Development Plan map and written controls to reflect the various approvals by Council and relevant planning control changes. These updates are contained in **Appendix E: Ettamogah Outline Development Plan (amended)**.

  The changes identified in **Appendix E** include:

  - The 'fire buffer (30m)' is now no longer relevant or applicable given site analysis and completed investigations under *Planning for Bushfire Protection* (RFS, 2006) which demonstrate that 10-15m wide APZs are required (as opposed to the superseded 30m under the 2001 controls). These APZs are unaffected by this Planning Proposal.

  - The 'building prohibited area' is now no longer relevant or applicable given demonstrated availability of reticulated water supply at adequate pressure for residential purposes above the 240m AHD contour. Condition B15 of Development Consent 10.2012.32005.4 required prior to the release of the Construction Certificate for Stage 2 of the development a Reticulated Water Assessment Report addressing this issue. This report was prepared and subsequently approved by Council and the Construction Certificate was released. This restriction is no longer relevant and can be removed from the Outline Development Plan.

  - The 'open space links' have been superseded by the adoption of the *Thurgoona Threatened Species Conservation Strategy* (AWDC) in 2004 which was implemented via the *Albury Land Use Strategy* (GHD, 2007) in

the current LEP through recognition of identified Retained Habitat Network.

- The '1,500m^2/4,000m^2 minimum subdivision lot size' boundaries have been adjusted to reflect the completed site, visual analysis and survey design work to support the proposed internal road and indicative lot layout prepared as part of this Planning Proposal. This has included an analysis of slope, internal road options and cut-and-fill analysis. The approved and adjusted subdivision design and variations to lot size provided in support of this Planning Proposal are indicative and still achieve the original intent in regard to site responsive development having consideration to land development opportunities and constraints.

- The 'accessway' point with Gerogery Road (formally known as Wagga Road as shown) is proposed via Central Reserve Road instead for improved traffic safety outcomes.

- The guideline 'landscape buffer/earthen mound' is no longer relevant or applicable as a traffic noise barrier to residential areas given that Wagga Road is no longer the Hume Highway. The Noise Impact Assessment completed for the site under the *Ettamogah Environmental Study 2001* (p. 34) identified that the relocation of the Hume Highway would reduce noise impacts to the Land and subsequently reduce building setbacks. Further Noise Assessment work was undertaken across the Land in relation to Condition A9 of Development Consent 10.2012.32005.4. This revised assessment was approved by Council and further supports removal of this requirement from the Outline Development Plan.

- The two 'intersections' to Wagga Road have been rationalised to one as approved in 'Stage 1' under Development Consent No. 10.2010.30657.4.

- No public open space was included in the original Ettamogah Outline Development Plan (which is not to be confused with the 'Open Space Links' which were shown for biodiversity reasons and which were provided and resolved via E3 zone land dedicated from the AWDC to Crown Lands/Council as a part of original estate englobo land subdivision), however public open space was provided for the northern part of the Land via Development Consent 10.2012.32005.1 in 'Stage 3' (Lot 128) being approximately 4,000 square metres in area and is proposed to be provided via this Planning Proposal for the southern part of the Land in an amendment to 'Stage 6' (Lot 647) being approximately 4,300 square metres in area which represents a shared dual use with a proposed stormwater detention facility, meaning that approximately 2,000 square metres of public open space will be available.

These existing and proposed arrangements are shown in **Appendix E: Ettamogah Outline Development Plan (amended)** as well as **Appendix I: Future concept subdivision plans** where applicable.

4.2.1.2 Site-specific merit

- *Does the Planning Proposal respond to the natural environment (including known significant environmental values, resources or hazards)?*

  The Land the subject of the Planning Proposal is not recorded or known to have any significant environmental values, resources or significant hazard attributes.

  Parts of the Land comprise "bush fire prone land". A detailed Bushfire Assessment Report was completed for the approved subdivision and development of the Land. The recommended Asset Protection Zones arising from that detailed assessment are incorporated within the proposed concept subdivision design **(Appendix I)** and are also included in amendments to the **Ettamogah Outline Development Plan (amended)** in **Appendix E**.

- *Does the Planning Proposal respond to existing uses, approved uses, and likely future uses of land in the vicinity of the proposal?*

  The Planning Proposal supports the existing approved staged residential subdivision of the Land and provides for ongoing residential development opportunity.

  Development Consent No 10.2012.332005.4 was originally approved on 29 October 2013 and consisted of:
  - 343 lot subdivision, with lots ranging in area from 1,501m^2 to 7,208m^2 (Stages 2 to 9),
  - construction of public roads and street tree planting, and
  - disconnection and capping of existing services and extension of new underground services, with supply of independent services to each lot.

  The approved subdivision of the land is currently underway and a copy of the current approved subdivision plan is included in **Appendix B.**

  The Planning Proposal alters development densities in relevant parts of the Estate however the indicative subdivision concept layout demonstrates that building setbacks adjoining the Nexus industrial lands to the immediate north of the Land remain unchanged from that originally approved via Development Consent No 10.2012.332005.4. It is acknowledged that smaller lots may front Central Reserve Road adjoining the Nexus industrial lands however given that there are no changes to building setbacks no additional measures are necessary to address residential amenity or mitigation of potential land use conflict. This is because the approved location of the nearest sensitive receiver to the Nexus industrial lands will not change under the Planning Proposal and therefore no relevant issues arise.

- *Does the Planning Proposal provide the services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision?*

The Planning Proposal includes a minor increase to the future development potential of the Land. The demands from this additional development potential can be easily met without substantial changes to infrastructure or provision of additional facilities, noting that an additional 2,000 square metres of public open space will be made available in 'Stage 6' (Lot 647).

The Land is already connected to reticulated water, sewer, stormwater, electricity, natural gas, and telecommunications services and with adequate capacity to accommodate the expected additional residential development of 27 lots.

An analysis of reticulated services capacity is provided at **Appendix F: Reticulated Services Assessment**.

An assessment of the impacts of further subdivision as a result of the Planning Proposal on existing road infrastructure has been completed and is included as **Appendix C: Traffic Impact Assessment**.

The amended residential subdivision of the Land would be subject to the Council's normal 'developer contribution' fees and charges.

The proposed future subdivision (**Appendix I**) increases the amount of available open space to 6,000m^2 (an additional 2000m^2) which is consistent with the intent of Condition A5 of Development Consent No. 10.2012.32005.4 (**Appendix B**).

Indicative concept plans outlining options for the future subdivision and development of the Land are included in **Appendix I.**

4.2.2 Is the planning proposal consistent with a council's local strategy or other local strategic plan?

The Planning Proposal is consistent with the *Albury Land Use Strategy* prepared in 2007 (GHD).

The Strategy specifically identified Ettamogah Rise Estate as part of the existing urban area and future urban expansion of the City.

The Strategy provides strategic guidance for the short, medium and long-term directions of the City's growth and development through to 2030 and in some cases beyond. The Strategy's focus is on land use issues, instead of broad municipal issues, and how they translate into statutory controls.

The main objectives of the Strategy are:

- to plan for the growth of an expanded city area, and
- to address NSW Government reforms aimed at creating a more streamlined standardised planning system.

The Planning Proposal is consistent with these objectives.

The consistency with the key planning principles and outcomes of the Strategy is discussed in **Section 4.2.1.1** of this Planning Proposal.

4.2.3 Is the planning proposal consistent with applicable state environmental planning policies?

The Planning Proposal is consistent with applicable state environmental planning policies as set out in **Appendix G: Applicable State Environmental Planning Policies**.

4.2.4 Is the planning proposal consistent with applicable Ministerial Directions (section 9.1(2) directions)?

The Planning Proposal is consistent with applicable directions as set out in **Appendix H: Applicable Directions under section 9.1(2) of the *Environmental Planning and Assessment Act 1979***.

4.3 Environmental, social and economic impact

4.3.1 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

Any future development of the Land in accordance with the Planning Proposal will comprise "biodiversity compliant development" (within the meaning of Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*) as the LEP is a "biodiversity certified EPI" (within the meaning of Part 8 of the *Biodiversity Conservation Act 2016*) meaning that any development of the Land is not likely to significantly affect any threatened species, population or ecological community or habitat.

4.3.2 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

The Planning Proposal provides for an increase in residential development density for certain parts of the Land by changing the Minimum Lot Size for those specific areas from 4,000m^2 to 1,500m^2. Consequential environmental effects are assessed on the basis of:

- changes to visual and landscape quality and neighbourhood character, and
- development transition management.

4.3.2.1 Visual and landscape quality and neighbourhood character

A visual assessment of the Land, including assessment of the sub-regional and local context of the landscape and views to and from the Land, was completed in addition to previous visual assessments under the *Ettamogah Environmental Study 2001.*

The assessment identified likely effects on visual and landscape quality of the Land and is supported by photographs in **Table 2: Site photographs**.

Sub-regional context

The Land is located within a part urban and undeveloped rural landscape visual environment. The main background and landscape relief to the Land is Crown Land (Red Light Hill) and a ridgeline complex located immediately to the west of the main residential development area. The land to the north of the existing residential development is open grazing land.

The Land is generally visible from Wagga Road and Gerogery Road. The Land is partially visible from residential areas to the east of the Hume Highway and railway corridor.

The view corridors in the sub-regional context are apparent from the Land to and from Wagga Road and areas to the immediate east of the Land including residential land on the eastern side of the Hume Highway. This is referred to as the 'eastern view corridor'. This eastern view corridor contains stands of existing vegetation that partially visually screen the Land and provide context to the views and surrounding landscape quality.

A separate view corridor – the northern view corridor – to and from Gerogery Road extends for approximately 1 kilometre along this road from the intersection with Wagga Road. This view corridor focuses on the northern part of the Land which is currently undeveloped.

The eastern view corridor has a distinct boundary being the Hume Highway corridor and associated vegetation within this corridor.

The Land in a sub-regional context forms part of the broader landscape. The Land is typical of the surrounding landscape which generally includes a mixture of urban land, commercial development and cleared open grazing land in the foothills.

The distant views from the eastern and northern view corridors are within the vicinity of 1-5 kilometres from the Land.

The position of the development within the lower sections of the hill and ridge complex to the west will mean that future development will be provided with a significant visual backdrop.

The combination of the physical layout of the future urban areas, existing and proposed vegetation will assist to reduce the cumulative impacts of development of the Land within these sub-regional corridors.

Local context

The Land forms part of the local visual catchment which is dominated by existing residential development within the 'Ettamogah Rise Estate', immediate views of Red Light Hill and associated ridgeline complex to the west.

The future development of the Land will cluster larger 4,000m^2 as well as 1,500m^2 lots along the western most extent of the boundary of the Land. This will provide sufficient outlook and views without necessarily being positioned to be dominant within the local visual catchment.

The subdivision and road layout both within the existing development and future stages will not contribute to impacts on localised views within the Land.

Within the local visual catchment the retention of existing vegetation and street tree planting will assist to contribute to visual relief within an urban context.

The *Ettamogah Environmental Study 2001* identified in Section 4.6 the general local visual context of the Land as follows –

> *Viewed from the highway, the Western portion is prominent because of its topography and One Tree Hill in the background. The alignment of the highway to the north of the Western portion enhances this prominence as the road bends slightly to the east as it approaches the Olympic Way intersection, bringing the land into direct view of the driver. Apart from this the land has no specific visual attraction because of its cleared rural character which is no different to the majority of other non-urban land adjoining the Hume Highway in other areas.*

The Study concluded in response to this assessment –

> *Development of land in the Study area can take advantage of the visual characteristics of the land by allowing residential development on the more elevated areas of the Western portion of the Study area. This will provide a desirable residential environment and is a better use of the land than other uses that may not benefit as much from the elevation.*

In considering the impacts of the Planning Proposal on local visual context for future residential development and site disturbance a separate analysis of the smaller lots has been completed. The cumulative visual impacts of cut-and-fill will be reduced with the corresponding indicative lot and internal road layout with the concept subdivision plans for the Land. This is demonstrated in **Figure 7: Cross-section plan detail on cut-and-fill management**.

Figure 7 examines cut-and-fill scenarios associated with a reduction of the Minimum Lot Size to 1,500m^2 to specific areas of the Land. The scenarios in **Figure 7** demonstrate that compliance with 1.0m cut and fill controls is possible and suitable gradients for construction can be achieved without the requirement for retaining walls. Reducing the need for large retaining walls will contribute to minimising visual impacts to future streetscape.

Figure 7 identifies that the reduction in Minimum Lot Size to these specific areas will not create an unacceptable cumulative visual impact.

This also demonstrates the ability for future development of the Land to comply with current and anticipated changes to construction/excavation standards for residential development.

Table 2: Site photographs

Photograph 1:

View west of the Land and Red Light Hill from 'Somerset Rise Estate'.

Photograph 2:

View west of the Land from the Grange Estate.

Photograph 3:

View of the Land from Wagga Road. This view corridor is dominated by existing native vegetation.

Photograph 4:

View south of the Land from Gerogery Road.

Photograph 5:

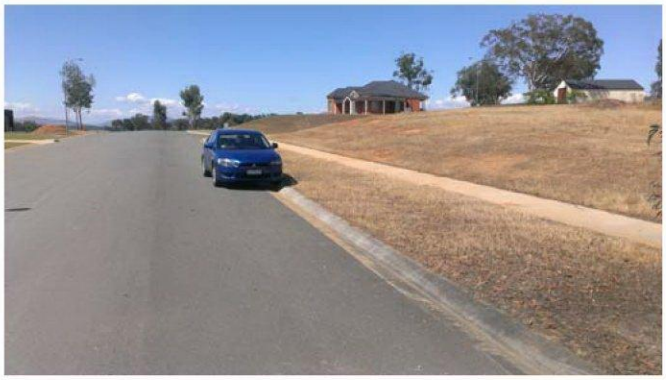
View of the Land and Red Light Hill from eastern boundary.

Photograph 6:

View south within the Ettamogah Rise Estate showing an existing road as a transition area between 1,500m^2 and 4,000m^2 lots.

Photograph 7:

View of typical 1,500m^2 lot development within 'Ettamogah Rise Estate'.



Photograph 8:

View of typical 4,000m^2 lot development within existing 'Ettamogah Rise Estate'.

Photograph 9:

View east from 'Stage 3' of 'Ettamogah Rise Estate'.

ETTAMOGAH RISE DA PLANS STAGES 6–9

OVERALL STAGE 2–9 STAGING PLAN

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SHEET 1 OF 7 A1

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ROAD RESERVE DETAIL

- 13m ROAD RESERVE
  3.5m NATURESTRIP
  6m INVERT–INVERT
- 19m ROAD RESERVE
  5.5m NATURESTRIP
  8m INVERT–INVERT
- 22m ROAD RESERVE
  5.5m NATURESTRIP
  11m INVERT–INVERT
- 26m ROAD RESERVE
  4.5m NATURESTRIP
  2*6.6m INVERT–INVERT
  3.8m MEDIUM STRIP

FIGURE 7: CROSS–SECTION PLAN DETAIL ON CUT & FILL MANAGEMENT

CENTRAL RESERVE ROAD
GEROGERY ROAD
THIMBLE CRT
CANNON CRT
FENCHURCH AVE
CHANGE CRT
FLEET CRT
KENT ST
STRAND TERRACE
TRAFALGAR ST
LANTERN CRT
PENTONVILLE ST
LIVERPOOL AVE
DARROW ST
SLOPE CHECK F
SLOPE CHECK E
COVENTRY ST
WAGGA ROAD
WHITEHALL AVE
SLOPE CHECK D
BOND ST
SLOPE CHECK C
EUSTON ST
SLOPE CHECK B
BOW CRT
MARYLEBONE AVE
SLOPE CHECK A
WINDSOR AVE
PICADILLY ST
REGENT ST
WATER RESERVOIR
LEICESTER ST
GREAT SOUTHERN RAILWAY
HUME HIGHWAY
MARLBOROUGH ST
MUNIONG

N W E S

H30 0 60 120 180
BAR SCALE

DOC19/144325

LOT SLOPE CHECK DETAIL:–

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  SIDE BOUNDARY SETBACK 5m
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  BUILDING FOOTPRINTS ROTATED FOR SOLAR ORIENTATION
  BUILDING FOOTPRINTS SIZED TO SUIT BLOCK (DIMENSIONS SHOWN)
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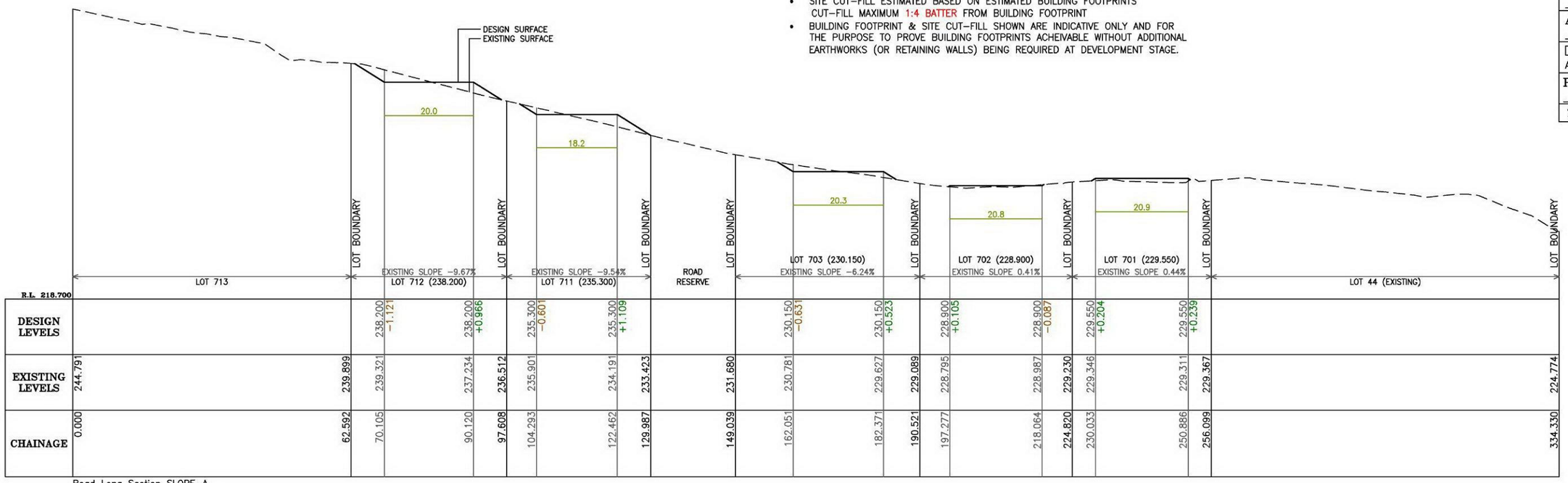

Road Long Section SLOPE–A
Scales: H 1 in 500V 1 in 200

ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT SLOPE CHECK–A

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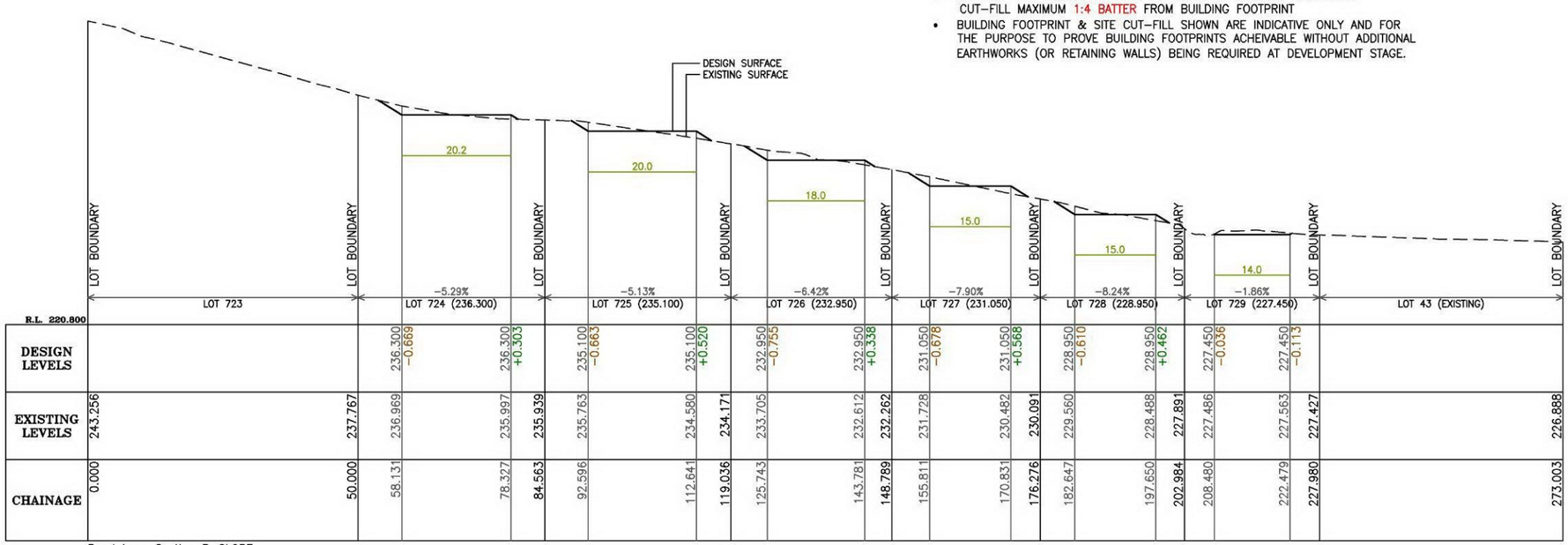

Road Long Section B–SLOPE
Scales: H 1 in 500V 1 in 200

ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT SLOPE CHECK–B

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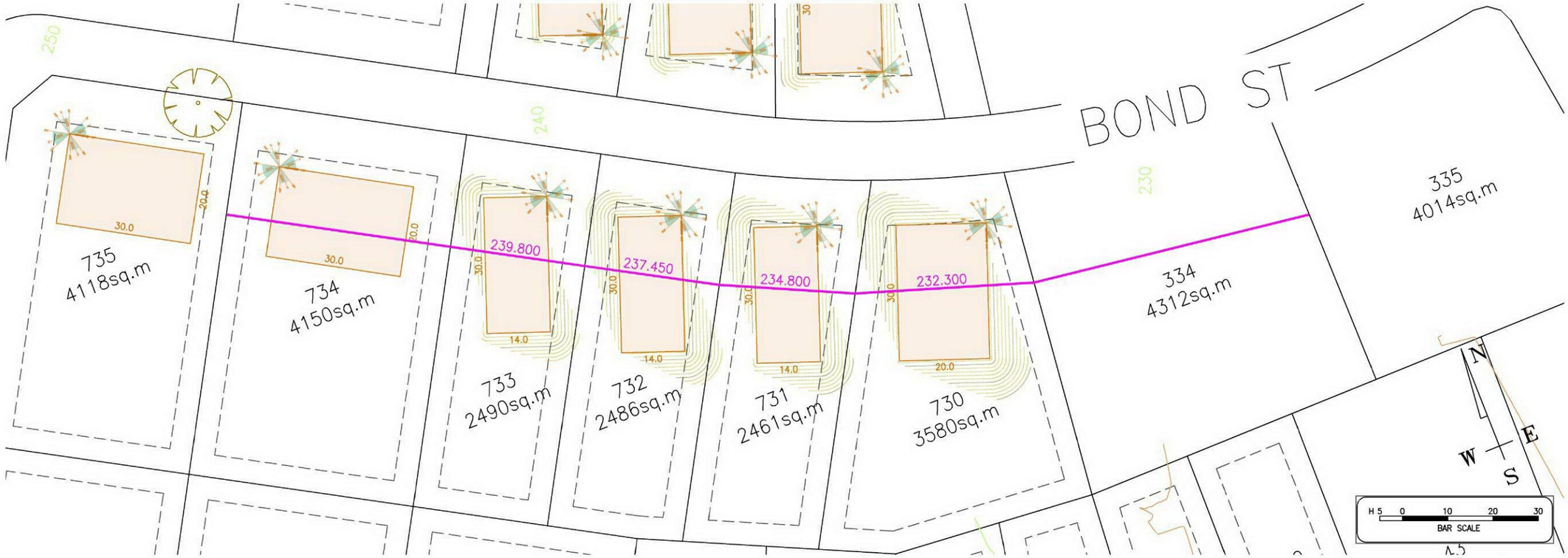

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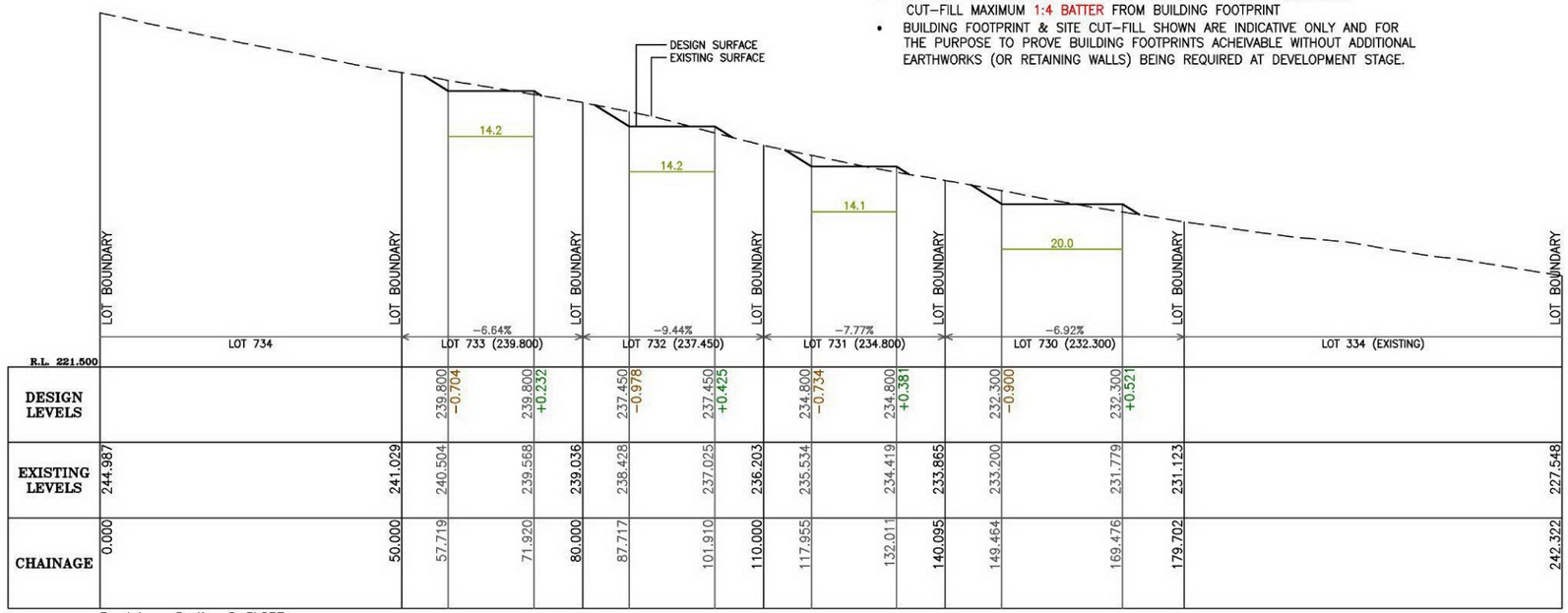

Road Long Section C–SLOPE
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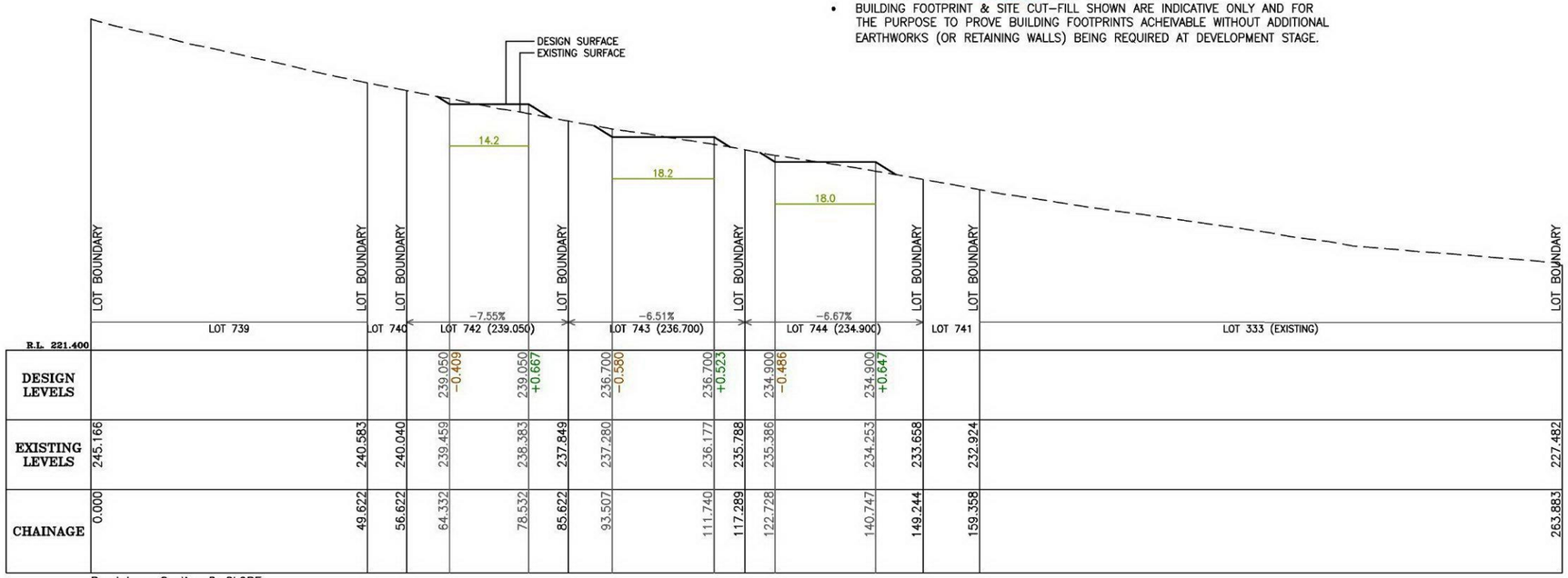

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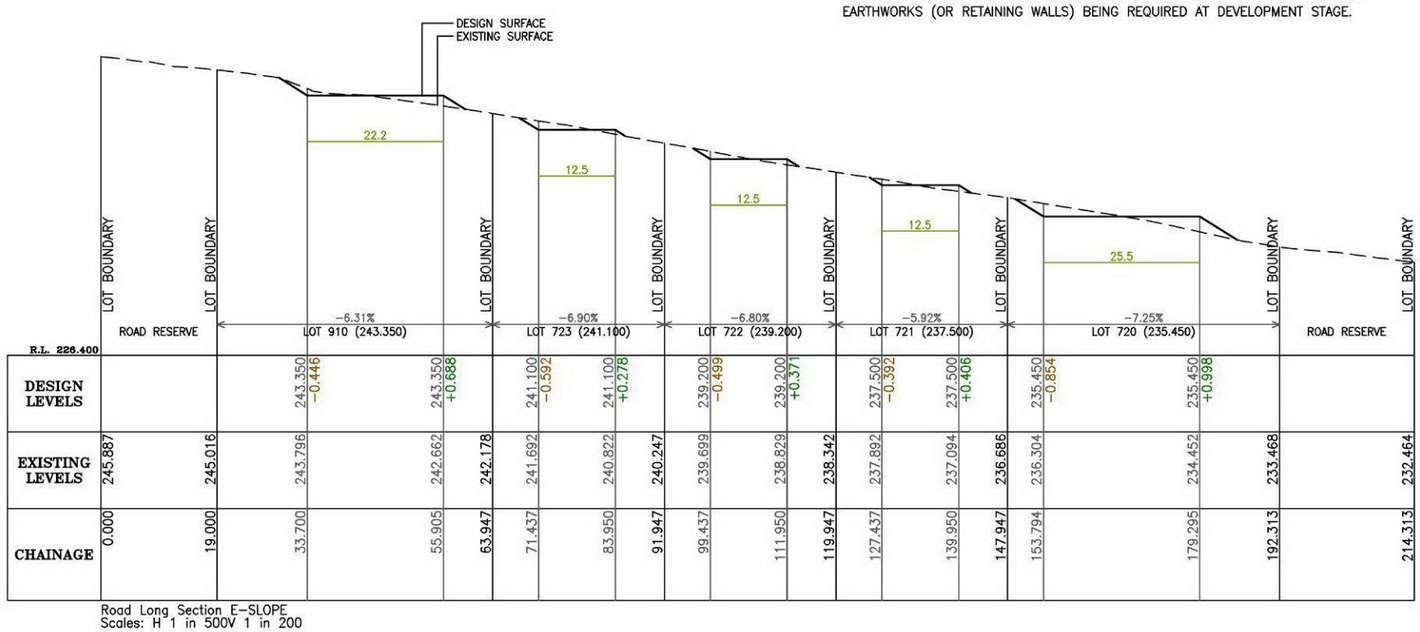
PROJECT No: 00016917 REV: Q

SHEET 5 OF 7 A1

FILE PATH:– P:\00017371\Planning\16917_ADA_Plans.dwg DATE SHEET PRINTED:– (Tuesday, May 14, 2019)

LOT SLOPE CHECK DETAIL:–

- BUILDING ENVELOPES ADDED TO LAYOUT PLANS
  FRONT BOUNDARY SETBACK 10m
  SIDE BOUNDARY SETBACK 5m
- ESTIMATED BUILDING FOOTPRINTS ADDED TO LAYOUT PLANS
  BUILDING FOOTPRINTS ROTATED FOR SOLAR ORIENTATION
  BUILDING FOOTPRINTS SIZED TO SUIT BLOCK (DIMENSIONS SHOWN)
- SITE CUT–FILL ESTIMATED BASED ON ESTIMATED BUILDING FOOTPRINTS
  CUT–FILL MAXIMUM 1:4 BATTER FROM BUILDING FOOTPRINT
- BUILDING FOOTPRINT & SITE CUT–FILL SHOWN ARE INDICATIVE ONLY AND FOR THE PURPOSE TO PROVE BUILDING FOOTPRINTS ACHEIVABLE WITHOUT ADDITIONAL EARTHWORKS (OR RETAINING WALLS) BEING REQUIRED AT DEVELOPMENT STAGE.



Road Long Section E–SLOPE
Scales: H 1 in 500V 1 in 200

ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT SLOPE CHECK–E

esler & ASSOCIATES
SURVEYORS CIVIL ENGINEERS DEVELOPMENT CONSULTANTS
598 Macauley Street, Albury
p: (02) 6021–1322
64 Hammond Avenue, Wagga Wagga
p: (02) 6921–3312
31 Baker St, Wangaratta
p: (03) 5721–5688
f: (02) 6021–8563
w: www.eslers.com.au
e: engineering@eslers.com.au
FS520879

AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 6–12 (REVISION P)	27/11/18
2. STAGE 6–9 (REVISION Q)	11/12/18
3. BLUEPRINT COMMENTS ACTIONED	13/05/19
4.	
5.	
6.	
7.	
8.	
9.	

EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2. STAGE 4 EXISTING SURFACE	27/11/18
3.	

AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2. NEARMAP.COM	10/12/18
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

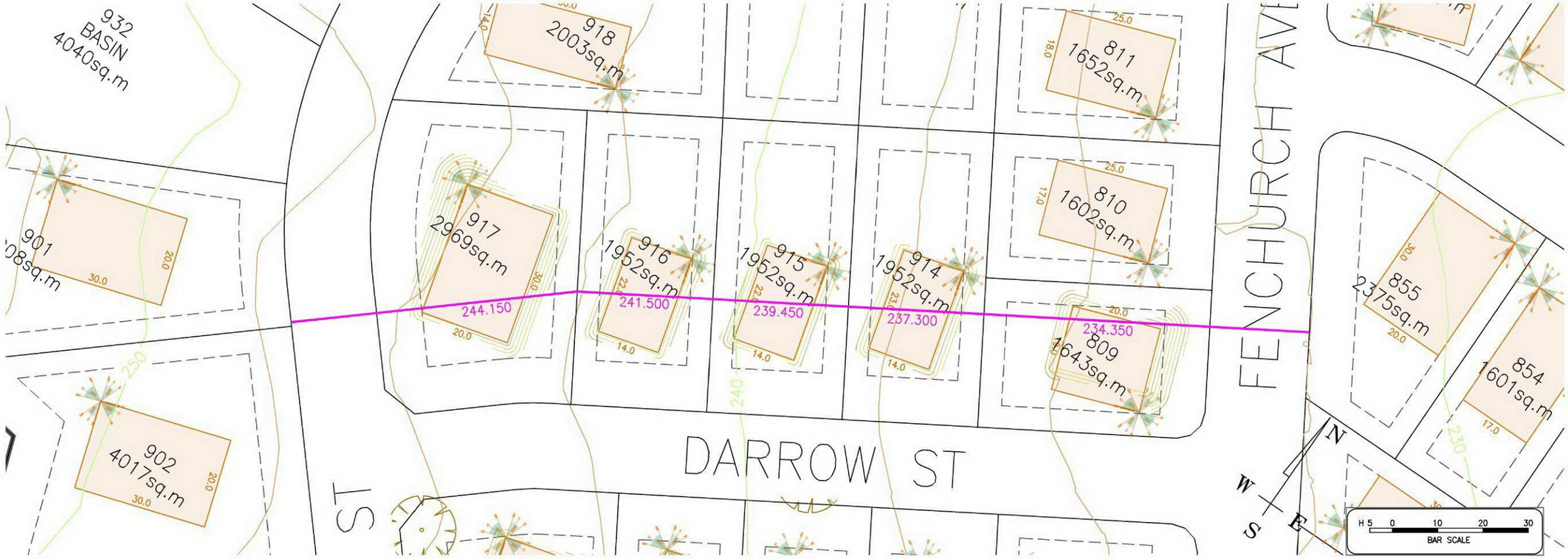
APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2018

PROJECT No: 00016917 REV: Q

SHEET 6 OF 7 A1

FILE PATH:– P:\00017371\Planning\16917_ADA_Plans.dwg DATE SHEET PRINTED:– (Tuesday, May 14, 2019)



LOT SLOPE CHECK DETAIL:–

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  FRONT BOUNDARY SETBACK 10m
  SIDE BOUNDARY SETBACK 5m
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  BUILDING FOOTPRINTS ROTATED FOR SOLAR ORIENTATION
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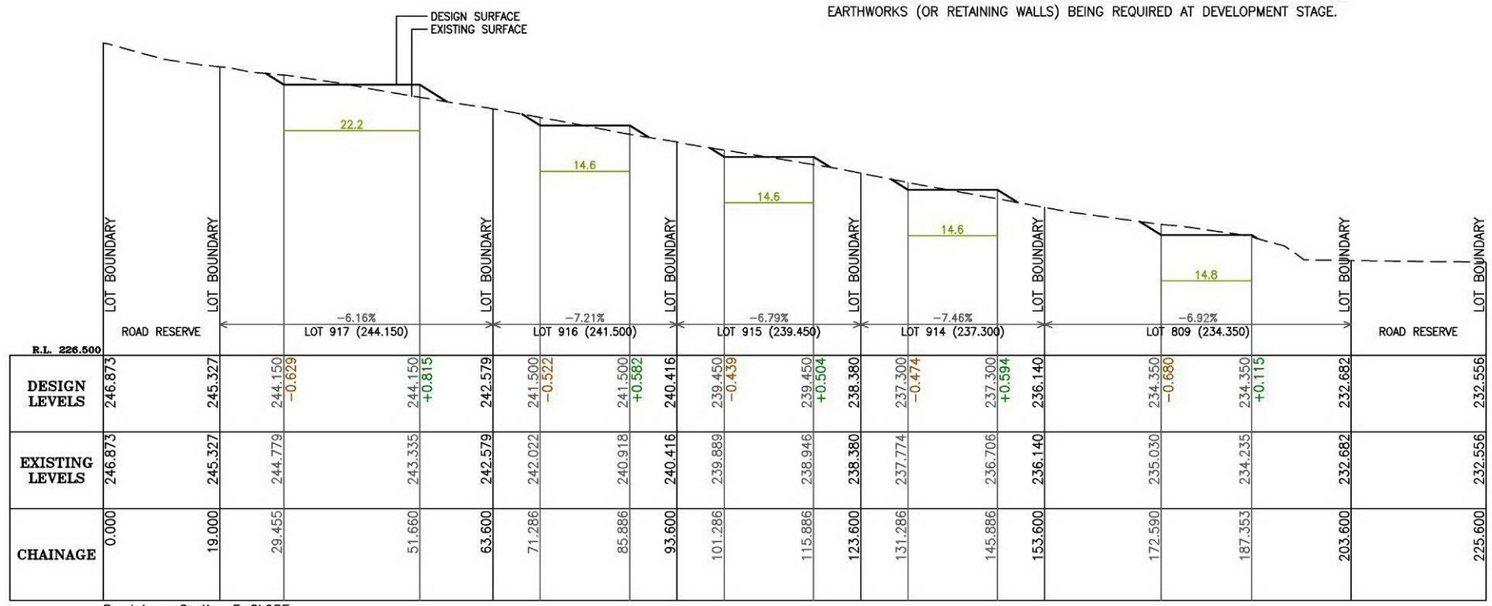

Road Long Section F–SLOPE
Scales: H 1 in 500V 1 in 200

ETTAMOGAH RISE DA PLANS STAGES 6–9

LOT SLOPE CHECK–F

esler & ASSOCIATES
SURVEYORS CIVIL ENGINEERS DEVELOPMENT CONSULTANTS
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w: www.eslers.com.au
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FS520879

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9.	
EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2. STAGE 4 EXISTING SURFACE	27/11/18
3.	
AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2. NEARMAP.COM	10/12/18
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2018

PROJECT No: 00016917 REV: Q

SHEET 7 OF 7 A1

FILE PATH:– P:\00017371\Planning\16917_ADA_Plans.dwg DATE SHEET PRINTED:– (Tuesday, May 14, 2019)

4.3.2.2 Development transition management

The reduction of the Minimum Lot Size to specific parts of the Land will introduce additional development 'transition' areas between development on smaller lots of 1,500m^2 and larger lots of 4,000m^2. The remaining transition locations will remain unaffected.

Within the existing approved development transition areas are managed and separated by the existing road layout. This is highlighted in the site photographs in **Table 2: Site photographs**.

This will be generally the same within the concept subdivision layout provided with this Planning Proposal with the exception of two areas where property boundaries will form new development transition areas between 1,500m^2 and 4,000m^2 lots.

The existing development and planning controls within the DCP (currently under revision by Council) and the revised Ettamogah Outline Development Plan forming part of the Planning Proposal will be sufficient to manage these new development transition areas as they address construction and building controls within the Ettamogah Rise Estate.

These controls include management of site coverage, building envelopes, landscaping, building heights, cut-and-fill, building setbacks, fencing and street tree planting.

The Planning Proposal will continue to enable Council to facilitate management of the transition areas and is consistent with the various objectives in the Outline Development Plan, as amended, including:

- 1.3.1 Subdivision – the Planning Proposal facilitates a variety of low density residential lot sizes that are designed having regard to the construction and opportunities presented by the land and to minimise impacts on the environment.
- 1.3.3 Building Siting – the Planning Proposal will not alter the controls that ensure that buildings are located to the advantage and to ensure adequate separation from adjoining dwellings and other land uses is achieved.
- 1.3.4 Building Design – the Planning Proposal will not alter the controls to ensure dwellings and ancillary buildings are constructed of materials and colours that blend with the surrounding environment and area energy-efficient.
- 1.3.5 Landscaping – the Planning Proposal will not alter the controls to enhance residential amenity and protect the visual catchment of Wagga Road.

There are no other likely environmental effects as a result of the Planning Proposal, noting that any residential development of the Land would require connection to reticulated services.

There are no items or places of European or Aboriginal cultural heritage that will be impacted by this Planning Proposal.

The *Ettamogah Environmental Study* (2001) specifically documented archaeology and heritage investigations and confirm the presence of the heritage listed 'Muniong'

residential property and site assessments undertaken by the Albury Aboriginal Land Council on 18 October 1999.

It is acknowledged that Due Diligence investigations for Aboriginal Cultural Heritage have been previously completed across the Land in 1999 and 2001 and these investigations did not identify any sites or items.

It is considered that these previous investigations satisfy the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* prepared by the former Department of Environment, Climate Change and Water in 2010. No further investigations are warranted in support of this Planning Proposal.

No items of European heritage will be directly impacted by the Planning Proposal including the locally heritage listed 'Muniong' property. The approved subdivision design incorporates a road reserve buffer to the property which increases protection of the curtilage of this site.

4.3.3 Has the planning proposal adequately addressed any social and economic effects?

The Planning Proposal provides for continued residential subdivision which will (incrementally) contribute to the social and economic fabric of the Springdale Heights area through (incremental) population growth.

This is consistent with the *Albury Wodonga Regional Economic Development Strategy 2018-2022* (Albury City Council, Wodonga City Council, Greater Hume Council, Federation Council, Indigo Shire Council, and the NSW Government Centre for Economic and Regional Development, 2018) in particular the factors influencing Element 5 of that Strategy - *Attract and retain talent to sustain the supply of skilled labour by improving liveability throughout the region.* The Strategy (p. 15) provides –

> *There are a number of factors that will have an impact on the decision of skilled workers to relocate to the area. Affordable housing, lifestyle blocks, access to services, strong communities, and vibrant local settings are factors that can make a location more appealing to a skilled workforce. Initiatives aimed at increasing the attractiveness of the region in any of these ways should be given consideration.*

This Planning Proposal will increase the supply of 1,500m^2 lots within Albury City.

The *Albury Land Use Strategy* (GHD, 2007) identifies the preferred location of community facilities and where these should be co-located with activity centres and commercial facilities. Supporting this Strategy Council has prepared Infrastructure Contribution Plans for the City.

The *Albury Infrastructure Contribution Plan 2014* sets out the framework and requirements proposed to help fund, plan and deliver infrastructure and services to

meet the needs of current and future residents of Albury in a planned and sustainable manner.

No specific contribution plan applies to Ettamogah Rise Estate.

The Infrastructure Contribution Plan acknowledges and examines future growth across the City and highlights the northern and eastern growth fronts. However Section 1.4 of the Plan identifies that development within existing residential areas (which it is assumed includes Ettamogah Rise Estate) is consistent with infill growth and likely to be of minor impact. Given the scale of infill development identified in this Planning Proposal there are unlikely to be any significant impacts on community or other related Council infrastructure.

Given the minor scale of future infill development arising from this Planning Proposal there is unlikely to be any significant impact through increased demand on existing social infrastructure including hospitals, schools and associated community infrastructure.

4.4 State and Commonwealth interests

4.4.1 Is there adequate public infrastructure for the planning proposal?

Adequate public infrastructure for the Planning Proposal already exists and will be made available to the additional 1,500m^2 lots through provision of reticulated services and additional public open space via a separate development approval issued by the Council.

4.4.2 What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

Consultation will be carried out with the public authorities/agencies as required by the Gateway Determination issued by the current Department of Planning and Environment in accordance with the EP&A Act.

5.0 MAPPING

The Planning Proposal requires LEP mapping changes as set out in **Table 1: Summary of LEP amendments** and **Figure 6: Minimum Lot Size Map (proposed)**.

6.0 COMMUNITY CONSULTATION

Community consultation is required in accordance with the EP&A Act and in accordance with *A guide to preparing local environmental plans* (Department of Planning and Environment, 2016) as follows –

- 28 day public exhibition period;
- notification provided to adjoining and surrounding landowners who may be directly or indirectly impacted;
- consultation with relevant government departments and agencies, service providers and other key stakeholders;
- public notices provided in local media;
- static displays and supporting material in Council public buildings, nominally: Albury City Council Administration Building, Albury;
- electronically available via Council's website including provision for electronic submissions;
- hard copies of all documentation being made available to the community free-of-charge; and
- electronic copies of all documentation being made available to the community free-of-charge.

7.0 PROJECT TIMELINE

The anticipated timeframe for processing the Planning Proposal is set out in **Table 3: Project timeline**.

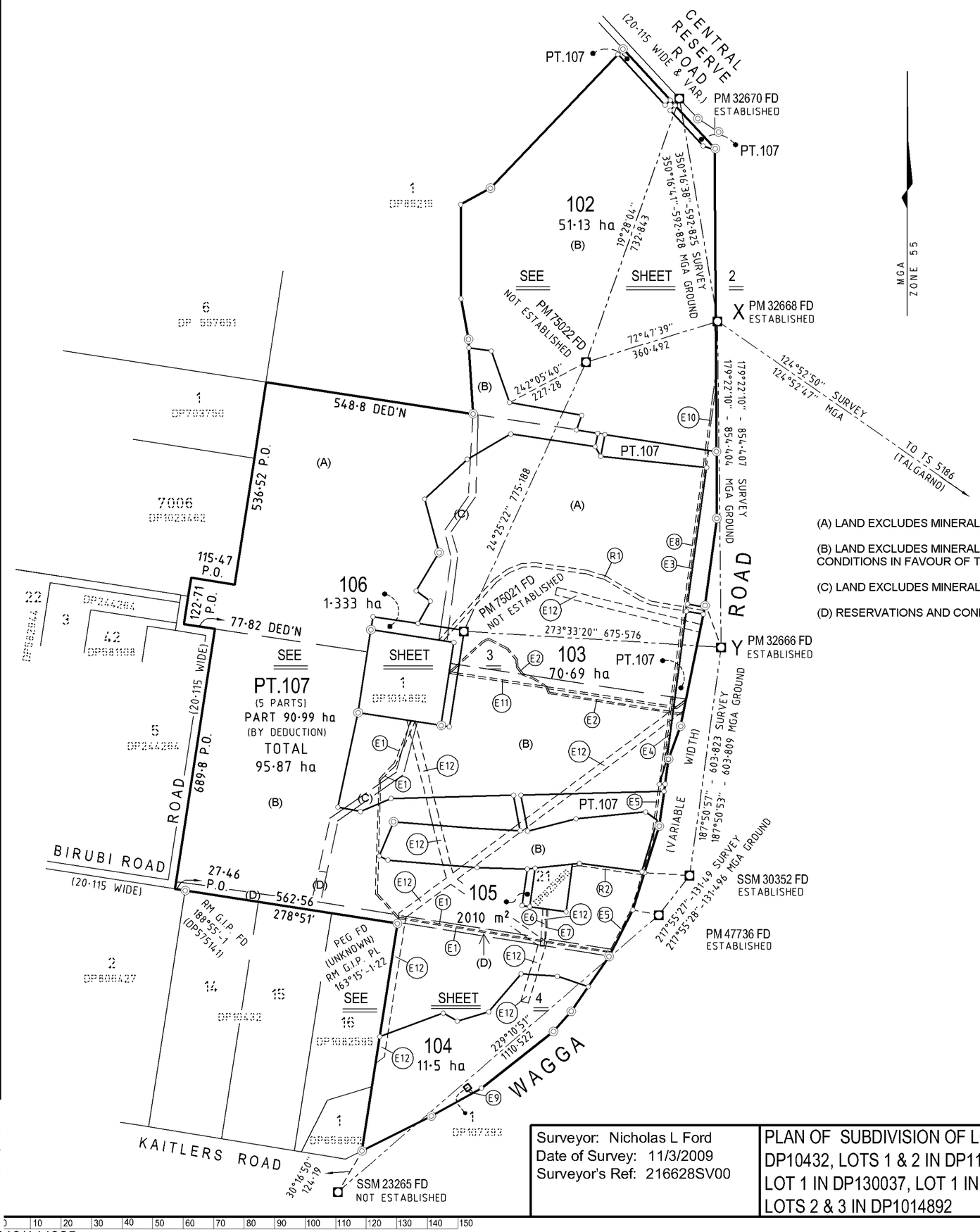
Table 3: Project timeline

Project milestone	*Estimated commencement date*	*Estimated completion date*
Anticipated commencement date (date of gateway determination)	4 weeks	TBD
Anticipated timeframe for the completion of required technical information	1 week	TBD
Timeframe for government department and agency consultation (pre and post exhibition as required by gateway determination)	3 weeks	TBD
Commencement and completion dates of public exhibition period	4 weeks	TBD
Dates for public hearing (if required)	Not anticipated to be required.	Not applicable.
Timeframe for consideration of public submissions	2 weeks	TBD
Timeframe for consideration of the Planning Proposal post exhibition	2 weeks	TBD
Date of submission of Planning Proposal to DPE for parliamentary counsel opinion	1 week	TBD
Anticipated date Council will make the plan (if delegated)	TBD	TBD
Anticipated date Council will forward the Planning Proposal to DPE for publication in the Government Gazette	TBD	TBD

*****

APPENDIX A:

Title diagrams



(R1) RIGHT OF ACCESS 10 WIDE (DP1014892)

(R2) RIGHT OF CARRIAGEWAY 6 WIDE (DP625950)

(E1) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (DP1014892)

(E2) EASEMENT FOR DRAINAGE OF WATER 4 WIDE (DP1014892)

(E3) EASEMENT FOR CO-AXIAL CABLE 3·66 WIDE (K.442352)

(E4) EASEMENT FOR UNDERGROUND TRUNK COMMUNICATIONS CABLES (L.18572)

(E5) EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE (W.311022)

(E6) EASEMENT FOR ELECTRICITY RETICULATION 10 WIDE (DP625950)

(E7) EASEMENT FOR WATER RETICULATION 3 WIDE (DP625950)

(E8) EASEMENT FOR WATER SUPPLY 5 WIDE (W.311022)

(E9) EASEMENT FOR ACCESS 6·095 WIDE (DP107393)

(E10) EASEMENT FOR WATER SUPPLY PIPELINE (W.311022)

(E11) EASEMENT FOR WATER SUPPLY 5 WIDE

(E12) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

(A) LAND EXCLUDES MINERALS - SEE CROWN GRANT

(B) LAND EXCLUDES MINERALS & SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT

(C) LAND EXCLUDES MINERALS - NO CROWN GRANT

(D) RESERVATIONS AND CONDITIONS IN THE CROWN GRANT

SURVEYING REGULATION 2006 : CLAUSE 61(2)

MARKS	MGA CO-ORDINATES		ZONE	CL	ORD
	EASTING	NORTHING			
PM 32666	497983·763	6013393·740	55	B	2
PM 32668	497974·364	6014247·720	55	A	1
PM 32670	497874·300	6014831·780	55	B	2
PM 47736	497820·567	6012692·164	55	B	2
TS 5186	508701·608	6006769·950	55	2A	0
SSM 30352	497901·352	6012795·846	55	A	1

SOURCE: S.C.I.M.S 30TH JANUARY 2009
COMBINED SCALE FACTOR: 0·999565

SURVEYING REGULATION 2006 : CLAUSE 35(1)(b)

SOURCE: PM 32666 SCIMS

MARKS	MGA CO-ORDINATES		ZONE	POSITIONAL UNCERTAINTY	METHOD	ORIGIN
	EASTING	NORTHING				
PM 75021	497309·781	6013435·619	55	50mm	CADASTRAL TRAVERSE	FOUND
PM 75022	497630·155	6014141·131	55	50mm	CADASTRAL TRAVERSE	FOUND
SSM 23265	496980·519	6011966·563	55	50mm	CADASTRAL TRAVERSE	FOUND

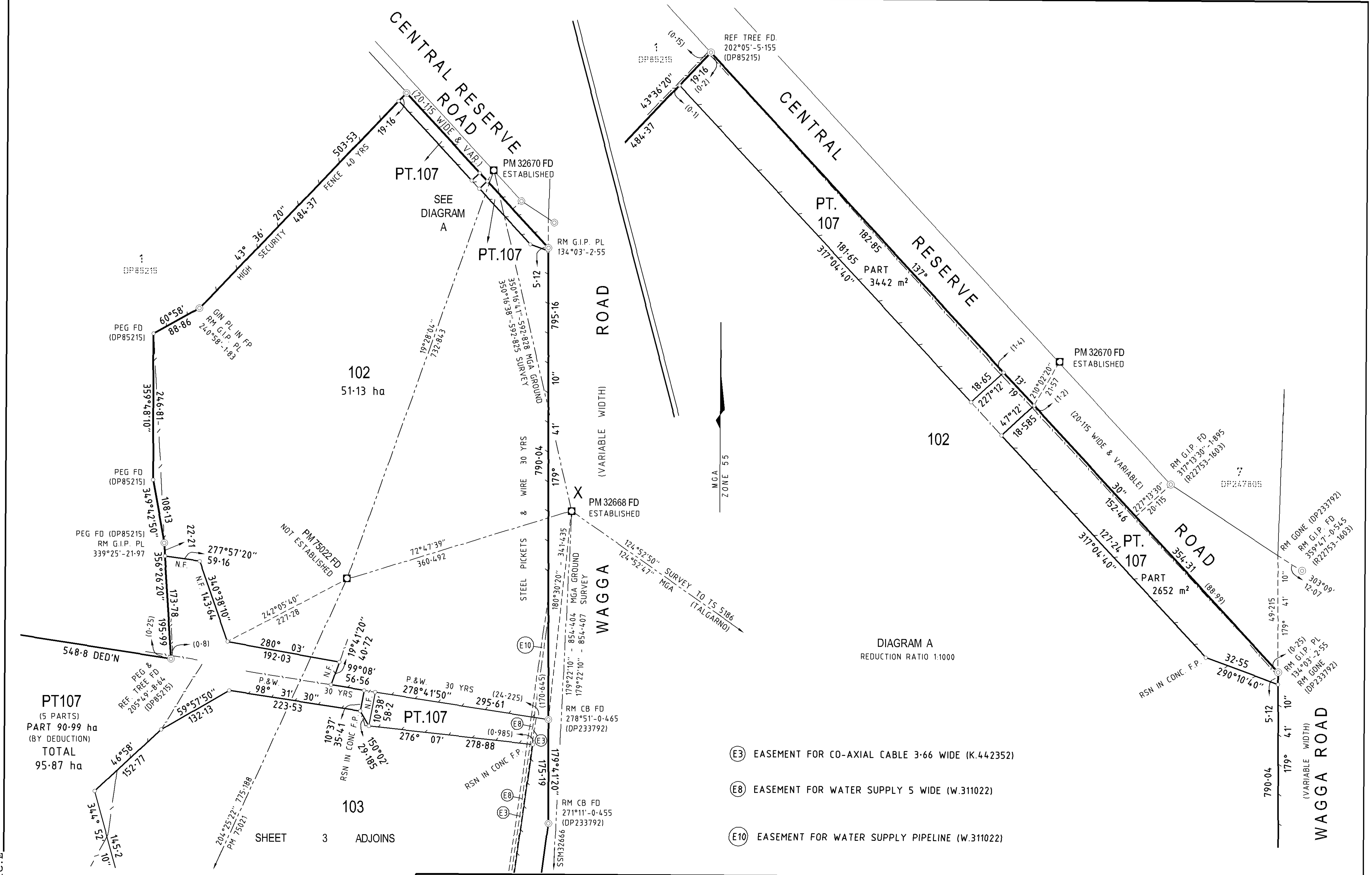
Surveyor: Nicholas L Ford
Date of Survey: 11/3/2009
Surveyor's Ref: 216628SV00

PLAN OF SUBDIVISION OF LOTS 17 & 18 IN DP10432, LOTS 1 & 2 IN DP114132, LOT 1 IN DP130037, LOT 1 IN DP241503 AND LOTS 2 & 3 IN DP1014892

LGA: ALBURY
Locality: SPRINGDALE HEIGHTS & ETTAMOGAH
Subdivision No.: 4301
Lengths are in metres. Reduction Ratio 1: 8000

Registered: 13.8.2009

DP1120977


CENTRAL RESERVE ROAD
(20·115 WIDE & VAR.)
PM 32670 FD ESTABLISHED
PT.107
SEE DIAGRAM A
PT.107
RM G.I.P. PL 134°03'-2·55
503·53
19·16
FENCE 40 YRS
43° 36' 20" 484·37
HIGH SECURITY
1 DP85215
60°58' 88·86
GIN PL IN FP RM G.I.P. PL 240°58'-1·83
PEG FD (DP85215)
359°48'10" 246·81
PEG FD (DP85215)
349°42'50" 108·13
PEG FD (DP85215) RM G.I.P. PL 339°25'-21·97
22·21
277°57'20" 59·16
N.F.
356°26'20" 173·78
340°38'10" N.F. 143·64
195·99
(0·25)
(0·8)
548·8 DED'N
PEG & REF. TREE FD 205°49'-8·64 (DP85215)
102
51·13 ha
19°28'04" 732·843
350°16'41"-592·828 MGA GROUND
350°16'38"-592·825 SURVEY
5·12
795·16
10"
41'
179°
790·04
STEEL PICKETS & WIRE 30 YRS
ROAD
(VARIABLE WIDTH)
X
PM 32668 FD ESTABLISHED
PM 75022 FD NOT ESTABLISHED
72°47'39" 360·492
242°05'40" 227·28
124°52'50" SURVEY TO TS 5186
124°52'47" MGA (TALGARNO)
180°30'20" 341·435
MGA GROUND SURVEY
179°22'10" - 854·404
179°22'10" - 854·407
WAGGA
280° 03' 192·03
19°41'20" 40·72
N.F.
99°08' 56·56
P.&W. 30 YRS
278°41'50" 295·61
(24·225)
(170·645)
E10
P.&W.
98° 31' 30" 223·53
30 YRS
59°57'50" 132·13
N.F.
10°38' 58·2
PT.107
10°37' 35·41
RSN IN CONC F.P.
150°02' 29·185
276° 07' 278·88
(0·985)
E8
E3
RM CB FD 278°51'-0·465 (DP233792)
RSN IN CONC F.P.
175·19
179°41'20"
E8
E3
RM CB FD 271°11'-0·455 (DP233792)
SSM32666
PT107
(5 PARTS)
PART 90·99 ha
(BY DEDUCTION)
TOTAL 95·87 ha
46°58' 152·77
344°52' 10"
145·2
204°25'22" 775·188 PM 75021
103
SHEET 3 ADJOINS
(0·15)
REF TREE FD. 202°05'-5·155 (DP85215)
1 DP85215
43°36'20"
19·16
(0·2)
(0·1)
484·37
CENTRAL RESERVE ROAD
PT. 107
182·85
181·65
PART 3442 m²
137°
317°04'40"
MGA ZONE 55
(1·4)
PM 32670 FD ESTABLISHED
18·65
227°12'
13'
19
210°02'20" 21·57
(1·2)
47°12'
18·585
102
(20·115 WIDE & VARIABLE)
RM G.I.P. FD 317°13'30"-1·895 (R22753-1603)
7 DP247805
227°13'30" 20·115
30"
152·46
PT. 107
127·24
PART 2652 m²
317°04'40"
354·31
(88·99)
ROAD
RM GONE (DP233792)
RM G.I.P. FD 359°47'-0·545 (R22753-1603)
303°09' 12·07
49·215
10"
41'
179°
DIAGRAM A
REDUCTION RATIO 1:1000
RSN IN CONC. F.P.
32·55
290°10'40"
(0·25)
RM G.I.P. PL 134°03'-2·55
RM GONE (DP233792)
5·12
10"
41'
179°
790·04
(VARIABLE WIDTH)
WAGGA ROAD

(E3) EASEMENT FOR CO-AXIAL CABLE 3·66 WIDE (K.442352)

(E8) EASEMENT FOR WATER SUPPLY 5 WIDE (W.311022)

(E10) EASEMENT FOR WATER SUPPLY PIPELINE (W.311022)

Surveyor: Nicholas L Ford Date of Survey: 11/3/2009 Surveyor's Ref: 216628SV00	PLAN OF SUBDIVISION OF LOTS 17 & 18 IN DP10432, LOTS 1 & 2 IN DP114132, LOT 1 IN DP130037, LOT 1 IN DP241503 AND LOTS 2 & 3 IN DP1014892	LGA: ALBURY Locality: SPRINGDALE HEIGHTS & ETTAMOGAH Subdivision No.: 4301 Lengths are in metres. Reduction Ratio 1: 4000	Registered: 13.8.2009	DP1120977

(R1) RIGHT OF ACCESS 10 WIDE (DP1014892)

(R2) RIGHT OF CARRIAGEWAY 6 WIDE (DP625950)

(E1) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (DP1014892)

(E2) EASEMENT FOR DRAINAGE OF WATER 4 WIDE (DP1014892)

(E3) EASEMENT FOR CO-AXIAL CABLE 3·66 WIDE (K.442352)

(E4) EASEMENT FOR UNDERGROUND TRUNK COMMUNICATIONS CABLES (L.18572)

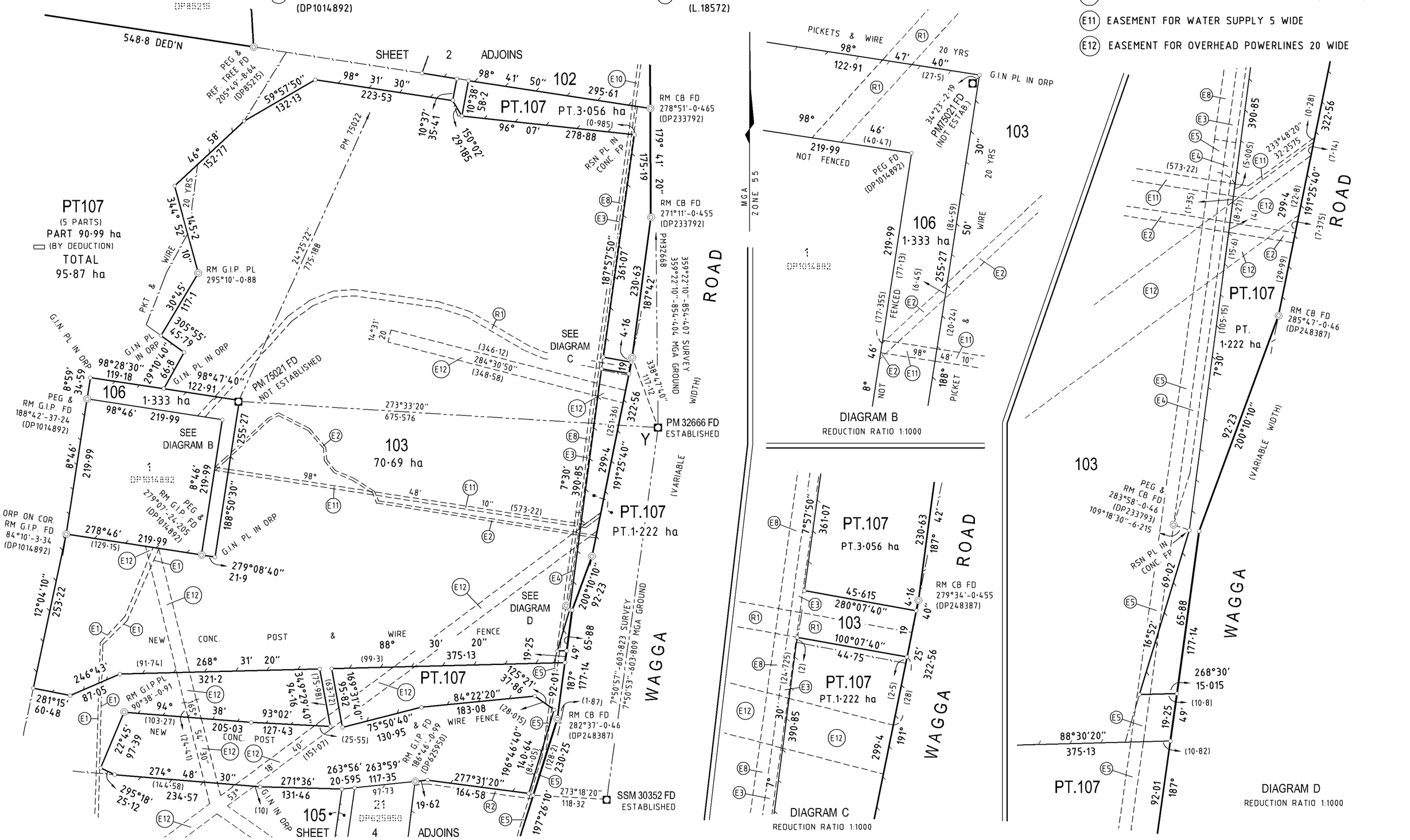
(E5) EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE (W.311022)

(E8) EASEMENT FOR WATER SUPPLY 5 WIDE (W.311022)

(E10) EASEMENT FOR WATER SUPPLY PIPELINE (W.311022)

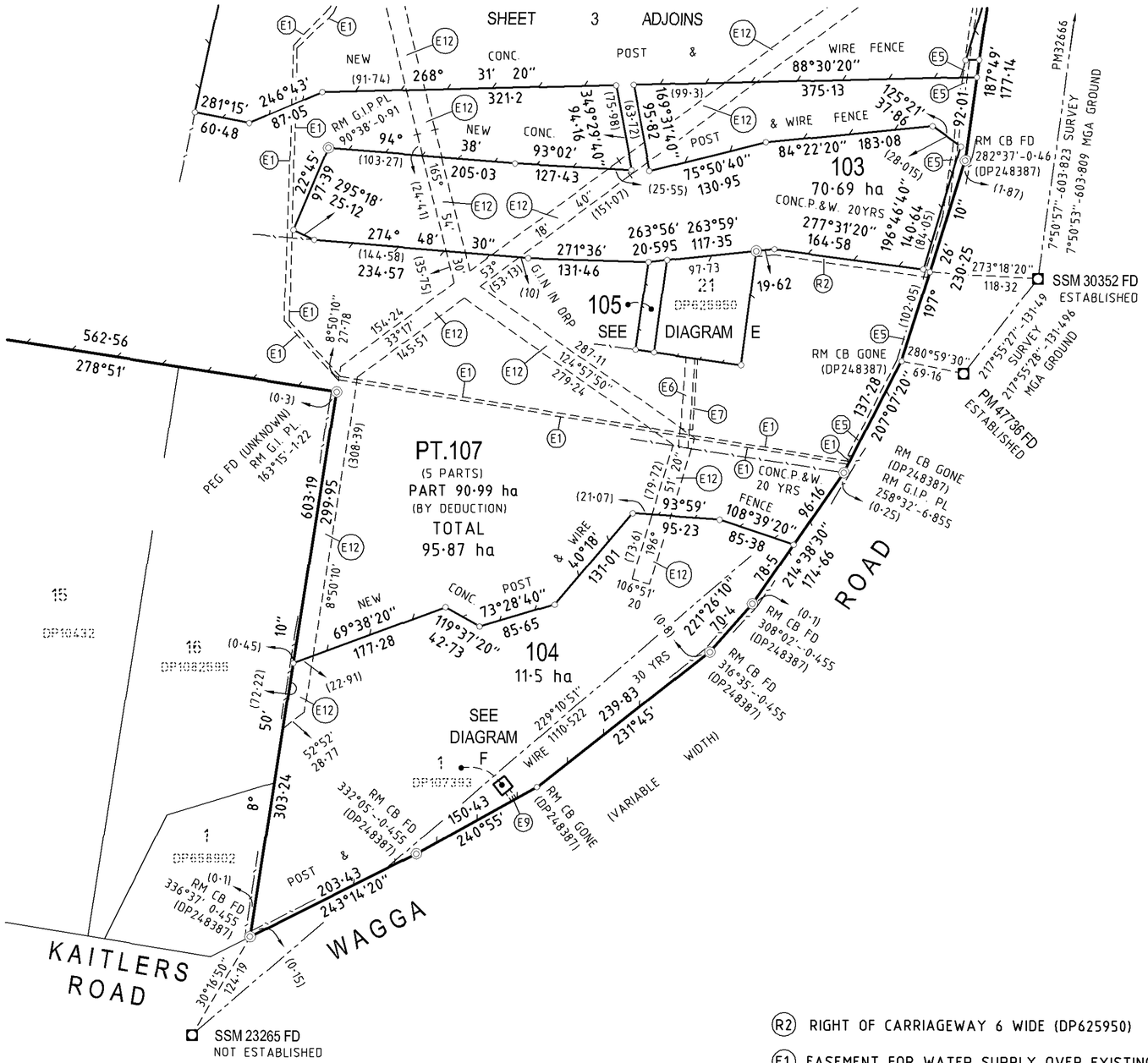
(E11) EASEMENT FOR WATER SUPPLY 5 WIDE

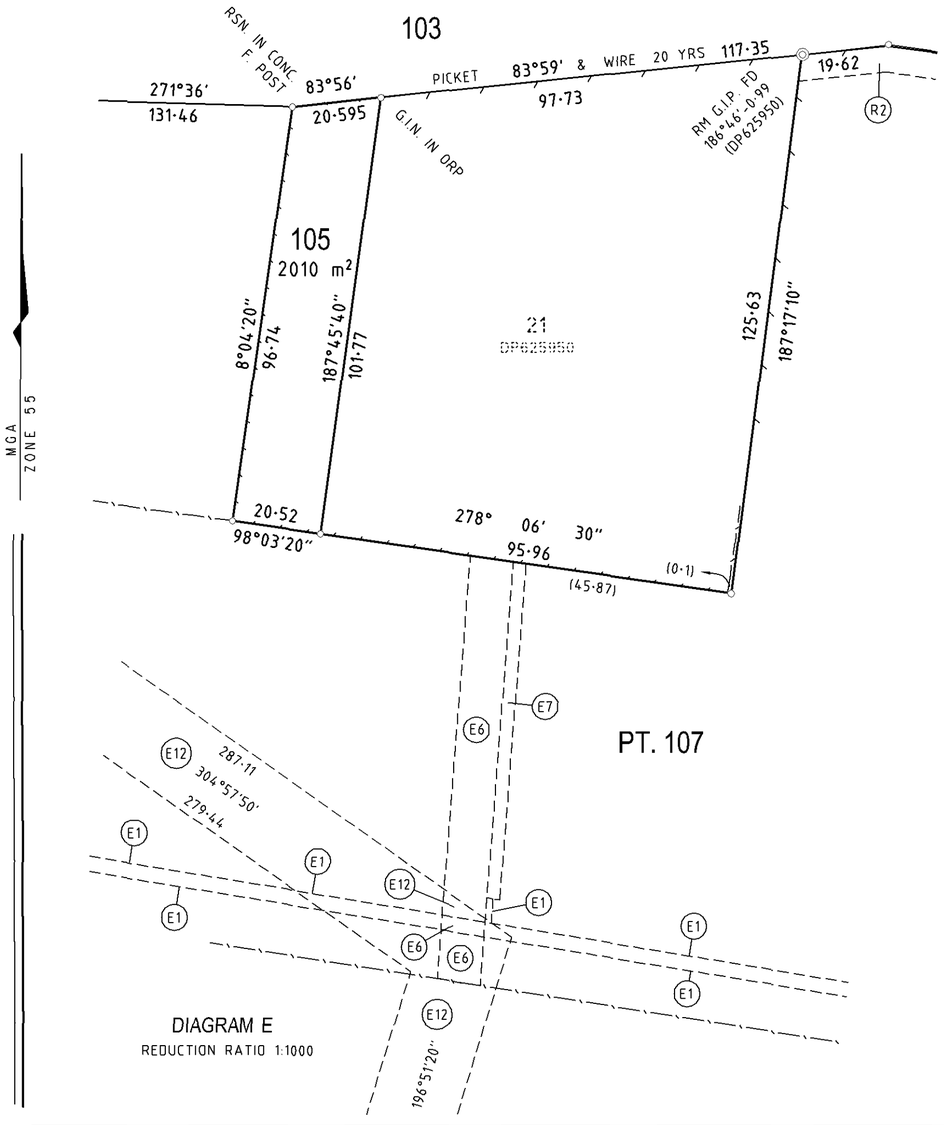
(E12) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

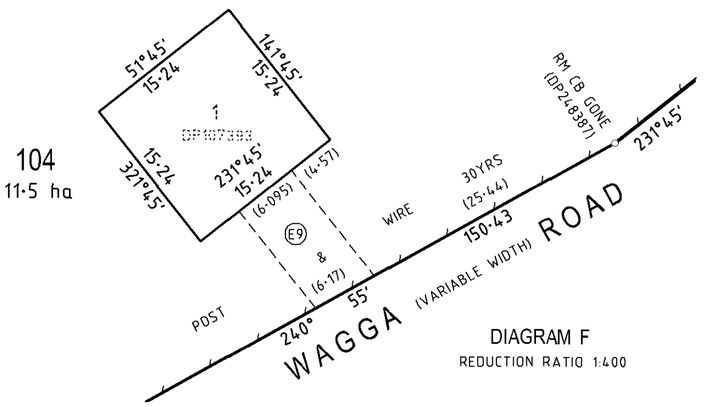


Surveyor: Nicholas L Ford Date of Survey: 11/3/2009 Surveyor's Ref: 216628SV00	PLAN OF SUBDIVISION OF LOTS 17 & 18 IN DP10432, LOTS 1 & 2 IN DP114132, LOT 1 IN DP130037, LOT 1 IN DP241503 AND LOTS 2 & 3 IN DP1014892	LGA: ALBURY Locality: SPRINGDALE HEIGHTS & ETTAMOGAH Subdivision No.: 4301 Lengths are in metres. Reduction Ratio 1: 4000	Registered: 13.8.2009	DP1120977

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150







(R2) RIGHT OF CARRIAGEWAY 6 WIDE (DP625950)

(E1) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (DP1014892)

(E5) EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE (W.311022)

(E6) EASEMENT FOR ELECTRICITY RETICULATION 10 WIDE (DP625950)

(E7) EASEMENT FOR WATER RETICULATION 3 WIDE (DP625950)

(E9) EASEMENT FOR ACCESS 6·095 WIDE (DP107399)

(E12) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

Surveyor: Nicholas L Ford Date of Survey: 11/3/2009 Surveyor's Ref: 216628SV00	PLAN OF SUBDIVISION OF LOTS 17 & 18 IN DP10432, LOTS 1 & 2 IN DP114132, LOT 1 IN DP130037, LOT 1 IN DP241503 AND LOTS 2 & 3 IN DP1014892	LGA: ALBURY Locality: SPRINGDALE HEIGHTS & ETTAMOGAH Subdivision No.: 4301 Lengths are in metres. Reduction Ratio 1: 4000	Registered: 13.8.2009	DP1120977

PLAN FORM 6 WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 1 sheet(s)

*OFFICE USE ONLY

SIGNATURES, SEALS and STATEMENTS of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restictions on the use of land or positive covenants.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO CREATE :

1. EASEMENT FOR WATER SUPPLY 5 WIDE
2. EASEMENT FOR OVERHEAD POWERLINES 20 WIDE
3. RESTRICTION ON USE OF LAND
4. POSITIVE COVENANT

Signed by me, Peter Veneris being a duly authorised delegate of the Albury-Wodonga Development Corporation and I hereby declare that I have no notice of any revocation of this delegation.

Signature of Witness

Name of Witness Dennis Hickey

OF 620 MACAULEY STREET, ALBURY, NSW 2640

Use PLAN FORM 6A for additional certificates, signatures, seals and statements

DP1120977 *

Registered: 13.8.2009 *

Title System: TORRENS

Purpose: SUBDIVISION

PLAN OF SUBDIVISION OF LOTS 17 & 18 IN DP10432, LOTS 1 & 2 IN DP114132, LOT 1 IN DP130037, LOT 1 IN DP241503 AND LOTS 2 & 3 IN DP 1014892

LGA: ALBURY

Locality: SPRINGDALE HEIGHTS & ETTAMOGAH

Parish: MUNGABARINA

County: GOULBURN

Crown Lands NSW/Western Lands Office Approval

I.....in approving this plan certify
(Authorised Officer)
that all necessary approvals in regard to the allocation of the land shown herein have been given

Signature:.....

Date:.....

File Number:.....

Office:.....

Subdivision Certificate

I certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to:

the proposed SUBDIVISION set out herein
(insert 'subdivision' or 'new road')

* Authorised Person/~~General Manager/Accredited Certifier~~

Consent Authority: ALBURY CITY COUNCIL
Date of Endorsement: 16 JULY 2009
Accreditation no:
Subdivision Certificate no: 4301
File no: DF 2376

* Delete whichever is inapplicable.

Surveying Regulation, 2006

I, Nicholas L Ford
of CPG,445 Townsend Street Albury, NSW 2640
a surveyor registered under the *Surveying Act, 2002*, certify that the survey represented in this plan is accurate, has been made in accordance with the *Surveying Regulation, 2006* and was completed on: ...11th March 2009

The survey relates to all land except western part of Lot 107

(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)

Signature.....*Dated* 27/7/09

Surveyor registered under the Surveying Act, 2002

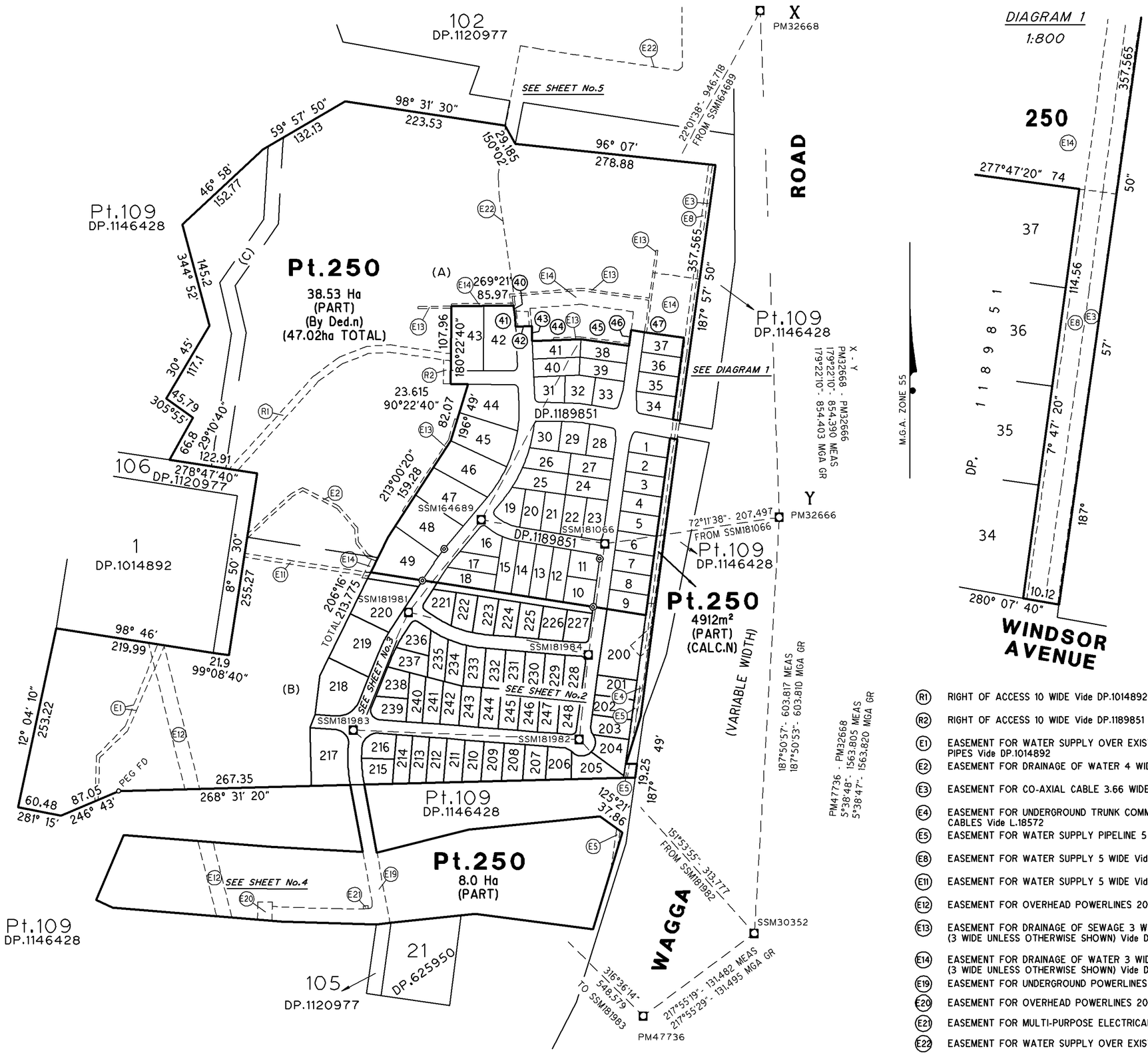
Datum Line: ..X - Y
Type: [redacted]/Rural

Plans used in the preparation of survey/~~compilation~~

DP10432	DP248387	R22753.1603
DP85215	DP575141	
DP107393	DP589681	
DP114132	DP613680	
DP130037	DP625950	
DP233792	DP636093	
DP241503	DP1014892	

(if insufficient space use Plan Form 6A annexure sheet)

SURVEYOR'S REFERENCE: 216628SV00



MARK	MGA CO-ORDINATES EASTINGS	MGA CO-ORDINATES NORTHINGS	CLASS	ORDER	METHOD	ORIGIN
SSM 30352	497 901.352	6 012 795.845	A	1	N/A	SCIMS
PM 32666	497 983.763	6 013 393.740	B	2	N/A	SCIMS
PM 32668	497 974.364	6 014 247.720	A	1	N/A	SCIMS
PM 47736	497 820.567	6 012 692.164	B	2	N/A	SCIMS
SSM 181066	497 786.290	6 013 330.316			TRAVERSE	DP1189851
SSM 164689	497 619.450	6 013 370.475			TRAVERSE	DP1189851
SSM 181981	497 527.461	6 013 239.871			TRAVERSE	PLACED
SSM 181982	497 753.616	6 013 072.513			TRAVERSE	PLACED
SSM 181983	497 443.835	6 013 090.601			TRAVERSE	PLACED
SSM 181984	497 769.840	6 013 186.168			TRAVERSE	PLACED

SOURCE · L.P.I. NSW (SCIMS) - 22 March 2016

COMBINED SCALE FACTOR OF 0.999565 ZONE 55

GNSS USED FOR PM CONNECTIONS ONLY

SHORT LINES				
LINE	BEARING	DISTANCE	RAD	ARC.
40	351°34'40"	9.825		
41	354°35'	19.86	189	19.87
42	267°36'	22		
43	357°36'	20.63		
44	267°36'	67.285		
45	277°47'20"	67.24		
46	187°47'20"	21.25		
47	277°47'20"	74		

(R1) RIGHT OF ACCESS 10 WIDE Vide DP.1014892

(R2) RIGHT OF ACCESS 10 WIDE Vide DP.1189851

(E1) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES Vide DP.1014892

(E2) EASEMENT FOR DRAINAGE OF WATER 4 WIDE Vide DP.1014892

(E3) EASEMENT FOR CO-AXIAL CABLE 3.66 WIDE Vide K.442352

(E4) EASEMENT FOR UNDERGROUND TRUNK COMMUNICATIONS CABLES Vide L.18572

(E5) EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE Vide W.311022

(E8) EASEMENT FOR WATER SUPPLY 5 WIDE Vide W.311022

(E11) EASEMENT FOR WATER SUPPLY 5 WIDE Vide DP.1120977

(E12) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE Vide DP.1120977

(E13) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851

(E14) EASEMENT FOR DRAINAGE OF WATER 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851

(E19) EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH

(E20) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

(E21) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE

(E22) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (Approximate Position)

(A) LAND EXCLUDES MINERALS - SEE CROWN GRANT

(B) LAND EXCLUDES MINERALS & SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT

(C) LAND EXCLUDES MINERALS - NO CROWN GRANT

10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm

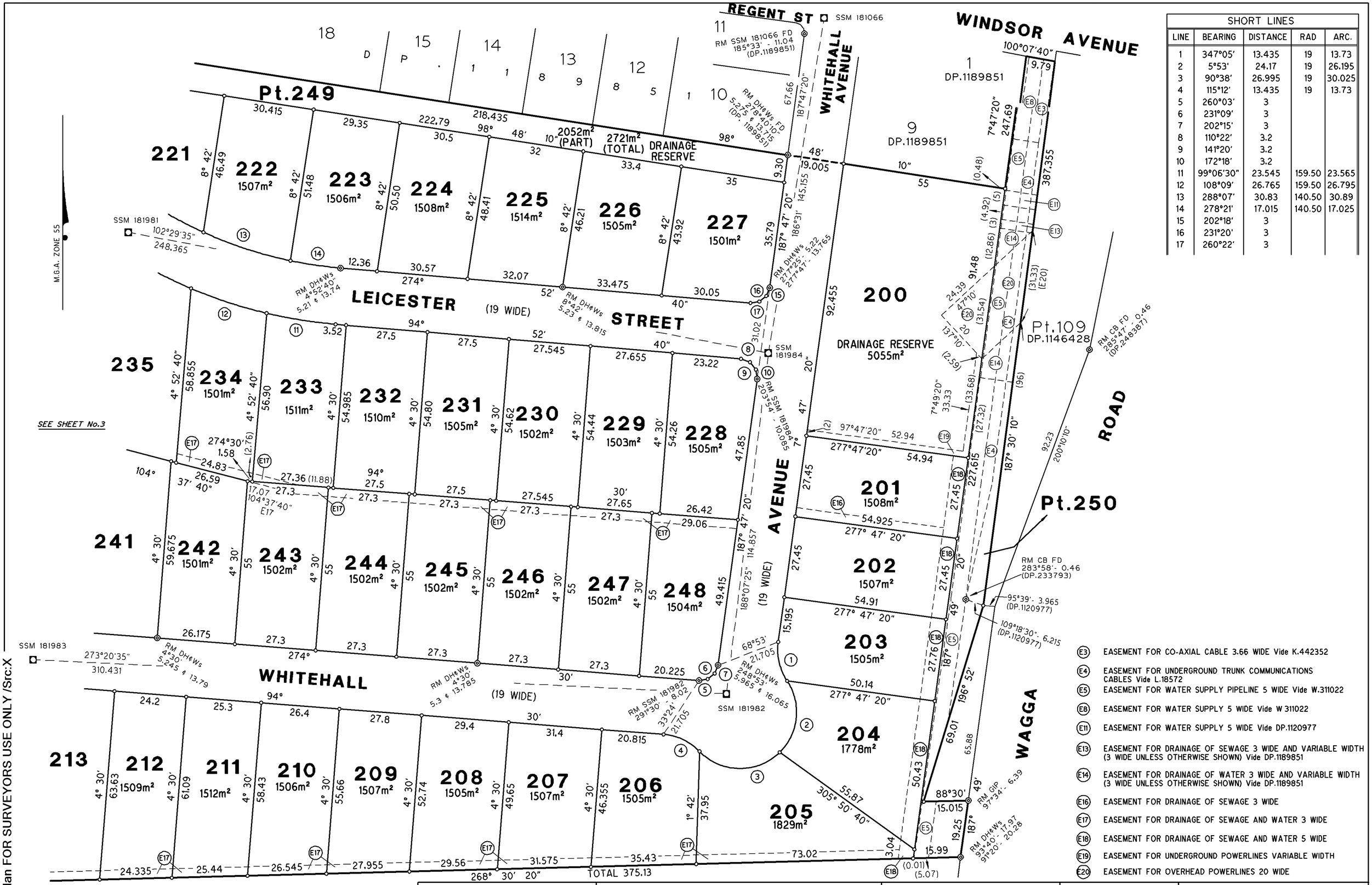
Surveyor CHARLES FRANSEN
Date Of Survey 24 March 2016
Surveyor's Reference 17121stage2
2016 M7100 (655) ADDITIONAL SHEET

PLAN OF SUBDIVISION OF LOT 50 DP1189851 AND EASEMENT CREATION WITHIN LOT 102 DP1120977

LGA: ALBURY
Locality: SPRINGDALE HEIGHTS
Subdivision No. 4793
Lengths are in metres. Reduction Ratio 1: 4000

Registered 8.7.2016

DP1218522



SHORT LINES				
LINE	BEARING	DISTANCE	RAD	ARC.
1	347°05'	13.435	19	13.73
2	5°53'	24.17	19	26.195
3	90°38'	26.995	19	30.025
4	115°12'	13.435	19	13.73
5	260°03'	3		
6	231°09'	3		
7	202°15'	3		
8	110°22'	3.2		
9	141°20'	3.2		
10	172°18'	3.2		
11	99°06'30"	23.545	159.50	23.565
12	108°09'	26.765	159.50	26.795
13	288°07'	30.83	140.50	30.89
14	278°21'	17.015	140.50	17.025
15	202°18'	3		
16	231°20'	3		
17	260°22'	3		

- (E3) EASEMENT FOR CO-AXIAL CABLE 3.66 WIDE Vide K.442352
- (E4) EASEMENT FOR UNDERGROUND TRUNK COMMUNICATIONS CABLES Vide L.18572
- (E5) EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE Vide W.311022
- (E8) EASEMENT FOR WATER SUPPLY 5 WIDE Vide W 311022
- (E11) EASEMENT FOR WATER SUPPLY 5 WIDE Vide DP.1120977
- (E13) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851
- (E14) EASEMENT FOR DRAINAGE OF WATER 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851
- (E16) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE
- (E17) EASEMENT FOR DRAINAGE OF SEWAGE AND WATER 3 WIDE
- (E18) EASEMENT FOR DRAINAGE OF SEWAGE AND WATER 5 WIDE
- (E19) EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH
- (E20) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

Pt.109 DP.1146428

Surveyor CHARLES FRANSEN Date Of Survey 24 March 2016 Surveyor's Reference 17121stage2 2016 M7100 (655) ADDITIONAL SHEET	PLAN OF SUBDIVISION OF LOT 50 DP1189851 AND EASEMENT CREATION WITHIN LOT 102 DP1120977	LGA: ALBURY Locality: SPRINGDALE HEIGHTS Subdivision No. 4793 Lengths are in metres. Reduction Ratio 1: 800	Registered 8.7.2016	DP1218522

10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm

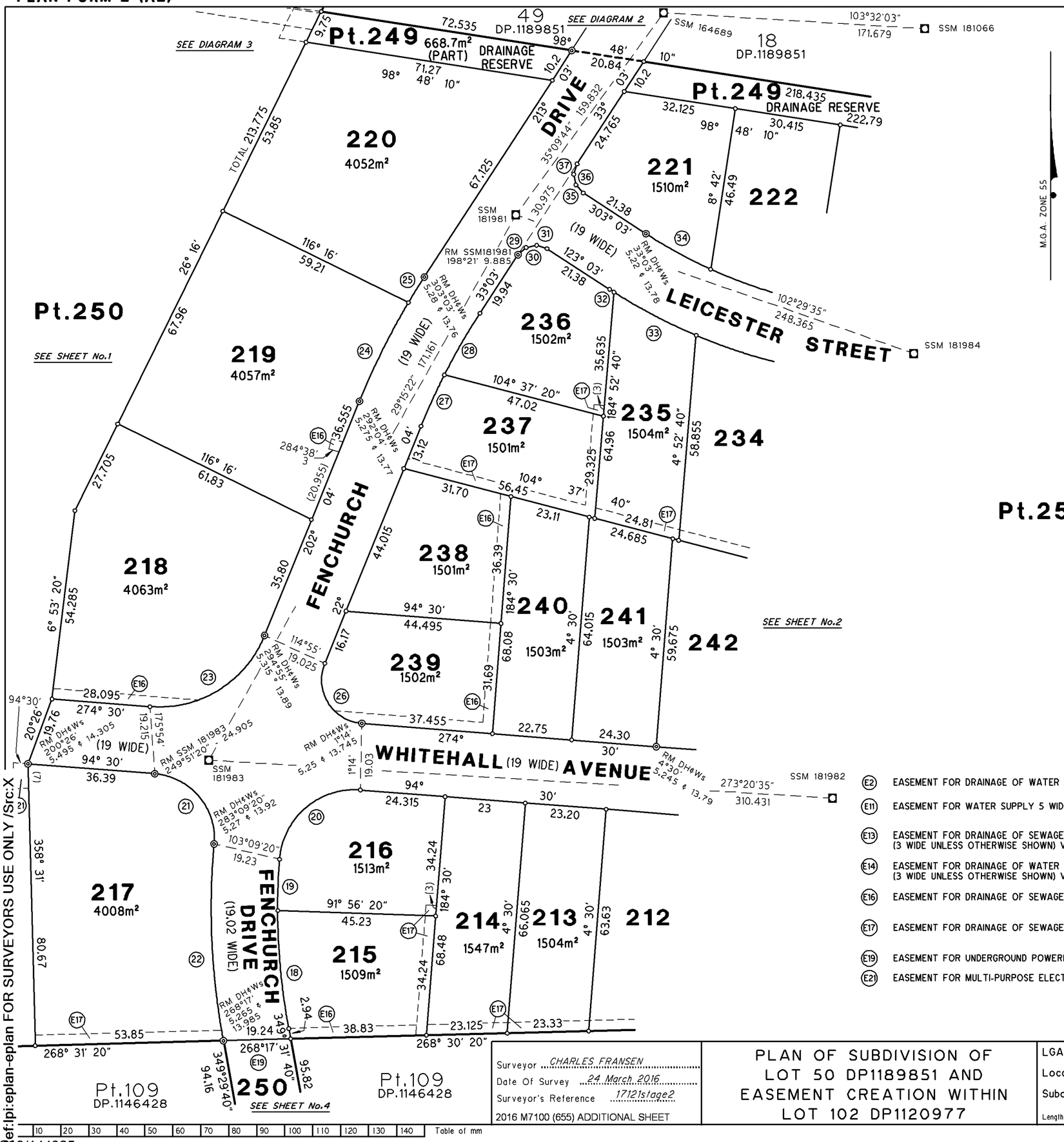


DIAGRAM 2
1:800

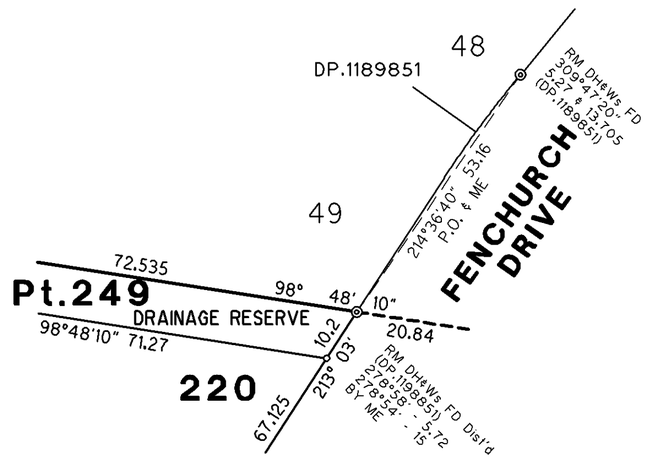


DIAGRAM 3
1:800

SHORT LINES				
LINE	BEARING	DISTANCE	RAD	ARC.
18	354°39'	33.935	188.79	33.98
19	2°02'	14.69	188.79	14.695
20	49°23'20"	30.465	21.50	33.855
21	139°48'	26.295	18.50	29.25
22	177°17'20"	56.375	207.81	56.55
23	238°05'	38.59	32.50	41.315
24	206°22'40"	31.505	209.50	31.535
25	211°52'	8.62	209.50	8.625
26	328°17'	20.17	12.50	23.47
27	24°30'	16.13	190.50	16.135
28	29°59'	20.37	190.50	20.38
29	48°03'	3.1		
30	78°03'	3.1		
31	108°03'	3.1		
32	122°48'	1.5	159.50	1.5
33	117°44'20"	26.535	159.50	26.565
34	298°44	21.15	140.50	21.17
35	318°03'	3.1		
36	348°03'	3.1		
37	18°03'	3.1		

(E2) EASEMENT FOR DRAINAGE OF WATER 4 WIDE Vide DP.1014892

(E11) EASEMENT FOR WATER SUPPLY 5 WIDE Vide DP.1120977

(E13) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851

(E14) EASEMENT FOR DRAINAGE OF WATER 3 WIDE AND VARIABLE WIDTH (3 WIDE UNLESS OTHERWISE SHOWN) Vide DP.1189851

(E16) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE

(E17) EASEMENT FOR DRAINAGE OF SEWAGE AND WATER 3 WIDE

(E19) EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH

(E21) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE

Surveyor CHARLES FRANSEN
Date Of Survey 24 March 2016
Surveyor's Reference 17121stage2
2016 M7100 (655) ADDITIONAL SHEET

PLAN OF SUBDIVISION OF LOT 50 DP1189851 AND EASEMENT CREATION WITHIN LOT 102 DP1120977

LGA: ALBURY
Locality: SPRINGDALE HEIGHTS
Subdivision No. 4793
Lengths are in metres. Reduction Ratio 1 : 800

Registered 8.7.2016

DP1218522

10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm

FENCHURCH DRIVE

SEE SHEET No.3

SEE SHEET No.2

Pt.250

217 215 214 213 212 211 210 209 208 207 206 205 204

268° 31' 20" 321.2

19.24

268°17'

268° 30' 20" 375.13

19.25

250

RM Dh&Ws. 268°17' 5.265 & 13.985

M.G.A. ZONE 55

Pt.109 DP.1146428

349°29'40" 94.16

169°31'40" 95.82

F.POST ON COR RM GONE (DP.1120977) RM GIP FD 147°19' - 1.385 (ORIGIN UNKNOWN)

POST & WIRE

NOT FENCED

94° 38' 204.98

93° 02' 127.43

183.08 84° 22' 20"

130.95 75° 50' 40"

NAIL FD C.POST RM GIP 308°52' - 13.595

37.86 125°21'

NAIL FD C.POST

RM GONE (DP.248387)

92.01 187° 49'

Pt.250

22° 45' 97.42

NAIL FD C.POST

NAIL FD ORP

25.12 295° 18'

234.57 274° 48' 30"

POST & WIRE

92°54' C 35.96 A 35.96 R 792.5

54.485 91°36'

90°18'40" C 35.615 A 35.615 R 792.5

88°46' A & C 7 R 792.5

3.41 72°01'

3.41 39°01'

3.41 6°01'

349°30'40" 73.28

169°30'40" 99.19

E20 1°43' 25.75 20.075

(13.26)

131.46 271° 36'

POST & WIRE

(19.025)

20.595 263°56'

NAIL FD ORP (DP.1120977)

117.35 263° 59'

(19.62)

PEG FD RM GIP FD 186°46' - 0.99 (DP.1120977)

277° 31' 20" 164.54

98°08'45" - 172.075 BY ME 172.04 (DP.625950)

7.76 111°30'

273°18'20" 118.32 (DP1120977)

SSM30352

196°46'40" 140.67

128.19 10°

26'

ROAD

197°

102.05

217°55'19" 131.482 MEAS 217°55'29" 131.495 MGA GR

280°59'30" 69.16 (DP1120977)

PM47736

NAIL FD ORP (DP.1120977) RM GIP 268°06' - 18.15

NAIL FD C.POST (DP.1120977) RM ST PICKET 251°40' - 7.045

105 DP.1120977

21 DP.625950

Pt.109 DP.1146428

Pt.109 DP.1146428

Pt.109 DP.1146428

WAGGA

E5 EASEMENT FOR WATER SUPPLY PIPELINE 5 WIDE Vide W.311022

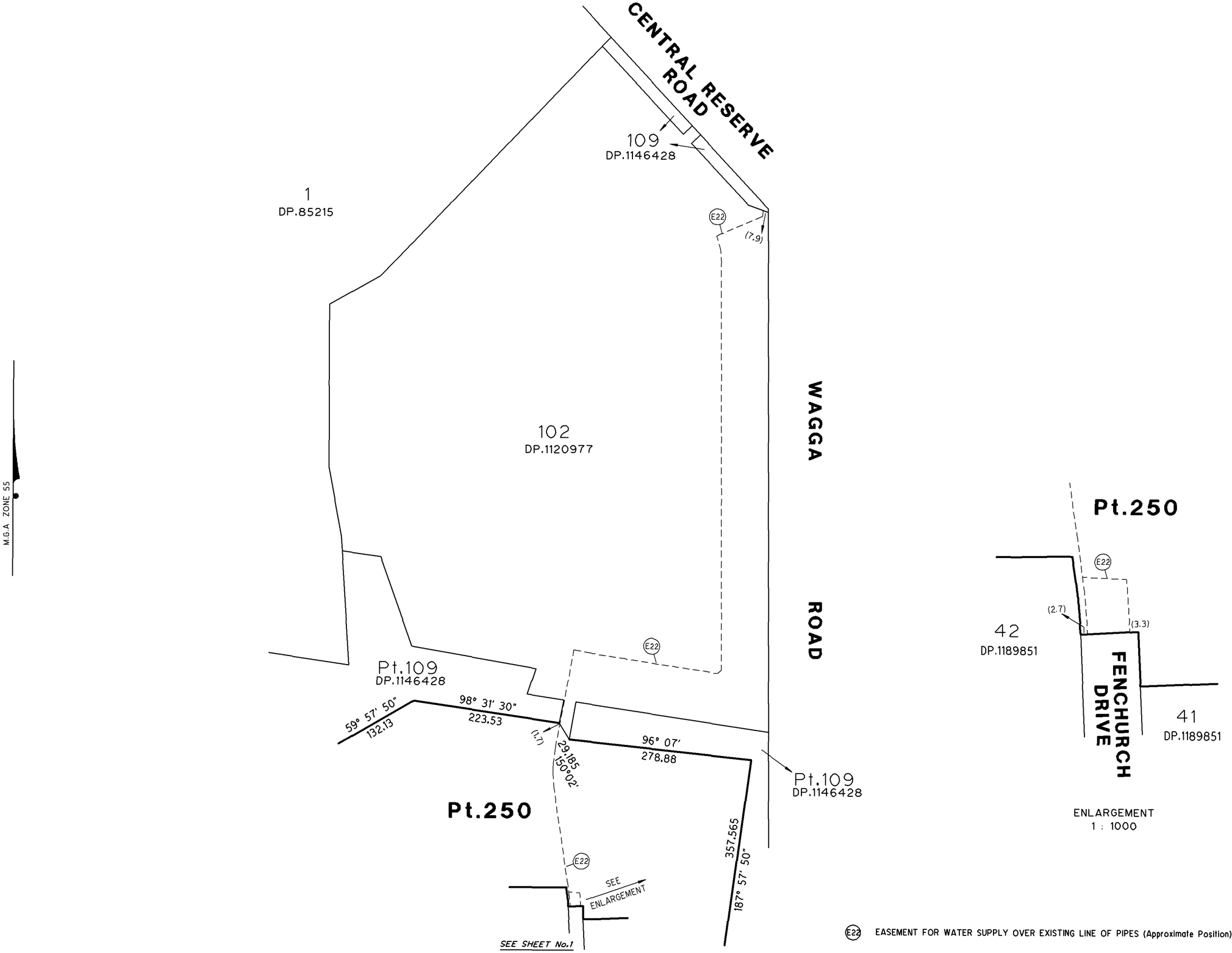
E19 EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH

E20 EASEMENT FOR OVERHEAD POWERLINES 20 WIDE

E21 EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE

Surveyor CHARLES FRANSEN Date Of Survey 24 March 2016 Surveyor's Reference 17121stage2 2016 M7100 (655) ADDITIONAL SHEET	PLAN OF SUBDIVISION OF LOT 50 DP1189851 AND EASEMENT CREATION WITHIN LOT 102 DP1120977	LGA: ALBURY Locality: SPRINGDALE HEIGHTS Subdivision No. 4793 Lengths are in metres. Reduction Ratio 1: 1250	Registered 8.7.2016	DP1218522

10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm



E22 EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (Approximate Position)

Surveyor CHARLES FRANSEN Date Of Survey 24 March 2016 Surveyor's Reference 1712Istage2 2016 M7100 (655) ADDITIONAL SHEET	PLAN OF SUBDIVISION OF LOT 50 DP1189851 AND EASEMENT CREATION WITHIN LOT 102 DP1120977	LGA: ALBURY Locality: SPRINGDALE HEIGHTS Subdivision No. 4793 Lengths are in metres. Reduction Ratio 1 : 4000	Registered 8.7.2016	DP1218522

10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm

PLAN FORM 6 (2012) **WARNING: Creasing or folding will lead to rejection** ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 3 sheet(s)

Office Use Only Registered: 8.7.2016 Title System: TORRENS Purpose: SUBDIVISION	Office Use Only DP1218522

PLAN OF SUBDIVISION OF LOT 50 DP1189851

AND EASEMENT CREATION WITHIN LOT 102 DP1120977

LGA: ALBURY
Locality: SPRINGDALE HEIGHTS
Parish: MUNGABARINA
County: GOULBURN

Crown Lands NSW/Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, Michael Keys

*Authorised Person/~~*General Manager/*Accredited Certifier~~, certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: ..... r Director

Accreditation number: .....

Consent Authority: Albury City Council

Date of endorsement: 21 June 2016

Subdivision Certificate number: 4793

File number: AF16/10373

*Strike through if inapplicable.

Survey Certificate

I, CHARLES FRANSEN

of ESLER & ASSOCIATES, 598 MACAULEY STREET, ALBURY 2640

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

~~*(a) The land shown~~ in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on .....

*(b) The part of the land shown in the plan (~~*being~~/*excluding ^ north west part Lot 250) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on 24 March 2016, the part not surveyed was compiled in accordance with that Regulation.

~~*(c) The land shown in this plan was~~ compiled in accordance with the *Surveying and Spatial Information Regulation 2012*.

Signature: ..... Dated: 22/6/16

Surveyor ID: 1061

Datum Line: X - Y

Type: *Urban/~~*Rural~~

The terrain is *Level-Undulating / ~~*Steep-Mountainous~~.

*Strike through if inapplicable.

^Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Statements of intention to dedicate public roads, public reserves and drainage reserves.

IT IS INTENDED TO DEDICATE WHITEHALL AVENUE, LEICESTER STREET AND FENCHURCH DRIVE TO THE PUBLIC AS PUBLIC ROAD.

IT IS INTENDED TO CREATE LOTS 200 AND 249 AS DRAINAGE RESERVE.

Plans used in the preparation of survey/compilation.

DP1189851, DP1120977, DP625950

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Surveyor's Reference: **17121stage2**
2016 M7100 (655) ADDITIONAL SHEET

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 3 sheet(s)

Office Use Only

Registered: 8.7.2016

Office Use Only

DP1218522

PLAN OF SUBDIVISION OF LOT 50 DP1189851

AND EASEMENT CREATION WITHIN LOT 102 DP1120977

Subdivision Certificate number: 4793

Date of Endorsement: 21 June 2016

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in *accordance with section 88B Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Lot	Street No.	Street name	Street type	Locality
200	79	Whitehall	Avenue	Springdale Heights
201	87	Whitehall	Avenue	Springdale Heights
202	89	Whitehall	Avenue	Springdale Heights
203	93	Whitehall	Avenue	Springdale Heights
204	95	Whitehall	Avenue	Springdale Heights
205	97	Whitehall	Avenue	Springdale Heights
206	99	Whitehall	Avenue	Springdale Heights
207	103	Whitehall	Avenue	Springdale Heights
208	105	Whitehall	Avenue	Springdale Heights
209	107	Whitehall	Avenue	Springdale Heights
210	109	Whitehall	Avenue	Springdale Heights
211	113	Whitehall	Avenue	Springdale Heights
212	115	Whitehall	Avenue	Springdale Heights
213	117	Whitehall	Avenue	Springdale Heights
214	121	Whitehall	Avenue	Springdale Heights
215	207	Fenchurch	Drive	Springdale Heights
216	203	Fenchurch	Drive	Springdale Heights
217	131	Whitehall	Avenue	Springdale Heights
218	130	Whitehall	Avenue	Springdale Heights
219	190	Fenchurch	Drive	Springdale Heights
220	182	Fenchurch	Drive	Springdale Heights
221	179	Fenchurch	Drive	Springdale Heights
222	7	Leicester	Street	Springdale Heights
223	9	Leicester	Street	Springdale Heights
224	11	Leicester	Street	Springdale Heights
225	15	Leicester	Street	Springdale Heights

Lot	Street No.	Street name	Street type	Locality
226	19	Leicester	Street	Springdale Heights
227	23	Leicester	Street	Springdale Heights
228	24	Leicester	Street	Springdale Heights
229	22	Leicester	Street	Springdale Heights
230	18	Leicester	Street	Springdale Heights
231	16	Leicester	Street	Springdale Heights
232	12	Leicester	Street	Springdale Heights
233	10	Leicester	Street	Springdale Heights
234	8	Leicester	Street	Springdale Heights
235	6	Leicester	Street	Springdale Heights
236	2	Leicester	Street	Springdale Heights
237	189	Fenchurch	Drive	Springdale Heights
238	193	Fenchurch	Drive	Springdale Heights
239	197	Fenchurch	Drive	Springdale Heights
240	122	Whitehall	Avenue	Springdale Heights
241	118	Whitehall	Avenue	Springdale Heights
242	114	Whitehall	Avenue	Springdale Heights
243	112	Whitehall	Avenue	Springdale Heights
244	110	Whitehall	Avenue	Springdale Heights
245	106	Whitehall	Avenue	Springdale Heights
246	104	Whitehall	Avenue	Springdale Heights
247	102	Whitehall	Avenue	Springdale Heights
248	98	Whitehall	Avenue	Springdale Heights
249	177	Fenchurch	Drive	Springdale Heights
250	N/A	N/A	N/A	Springdale Heights

PURSUANT TO SECTION 88B, OF THE CONVEYANCING ACT 1919, IT IS INTENDED TO CREATE:

1) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE (SHOWN AS E16 ON THE PLAN).
2) EASEMENT FOR DRAINAGE OF SEWAGE AND WATER 3 WIDE (SHOWN AS E17 ON THE PLAN).
3) EASEMENT FOR DRAINAGE OF SEWAGE AND WATER 5 WIDE (SHOWN AS E18 ON THE PLAN).
4) EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH (SHOWN AS E19 ON THE PLAN).
5) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE (SHOWN AS E20 ON THE PLAN).
6) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE (SHOWN AS E21 ON THE PLAN).
7) RESTRICTION ON THE USE OF LAND.
8) RESTRICTION ON THE USE OF LAND.
9) EASEMENT FOR WATER SUPPLY OVER EXISTING LINE OF PIPES (SHOWN AS E22 ON THE PLAN).

TO RELEASE:

1) EASEMENT FOR OVERHEAD POWERLINES 20 WIDE CREATED BY DP1120977.
2) EASEMENT FOR DRAINAGE OF SEWAGE 3 WIDE AND VARIABLE WIDTH CREATED BY DP1189851.
3) EASEMENT FOR DRAINAGE OF WATER 3 WIDE AND VARIABLE WIDTH CREATED BY DP1189851.
4) EASEMENT FOR WATER SUPPLY 5 WIDE CREATED BY DP1120977.

If space is insufficient use additional annexure sheet

Surveyor's Reference: **17121stage2**

2016 M7100 (655) ADDITIONAL SHEET

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 3 of 3 sheet(s)

Office Use Only

Registered: 8.7.2016

Office Use Only

DP1218522

PLAN OF SUBDIVISION OF LOT 50 DP1189851

AND EASEMENT CREATION WITHIN LOT 102 DP1120977

Subdivision Certificate number: 4793

Date of Endorsement: 21 June 2016

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

THE COMMON SEAL OF)
THE TRUSTEES OF THE)
ROMAN CATHOLIC CHURCH FOR)
THE DIOCESE OF WAGGA WAGGA)
was hereunto affixed under the authority)
of a resolution duly passed at a meeting)
of the Body Corporate in our presence:-)

THE SEAL OF THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF WAGGA WAGGA

Bishop GERARD JOSEPH HANNA.

Members of the Body Corporate

DENNIS JAMES PORCELL

If space is insufficient use additional annexure sheet

Surveyor's Reference: **17121stage2**
2016 M7100 (655) ADDITIONAL SHEET

APPENDIX B:

Development Consent No. 10.2012.32005.4

Reference: 51376
Contact: Terri O'Brien

DEVELOPMENT CONSENT

Approval Number: 10.2012.32005.4
Endorsed Date of Consent: 29 October 2013
As Amended: 27 June 2014
11 March 2015
14 November 2018

Eslers Land Consulting
PO Box 3055
ALBURY NSW 2640

Subject Land
Lot 102 & 103 DP1120977
629 Wagga Road & 43 One Tree Lane
ETTAMOGAH & SPRINGDALE HEIGHTS

Description of Development
Three Hundred & Thirty-Seven (337) Lot Torrens Title Subdivision - Ettamogah Rise Estate - Stages 2-9

Attached to Approval:
1. Conditions
2. Plans and information endorsed with Consent.

NOTICE OF DETERMINATION OF A DEVELOPMENT APPLICATION issued under the *Environmental Planning and Assessment Act 1979* Section 96(1a).

The development application has been determined by the granting of consent subject to the conditions referred to in this Notice and attached hereto.

This Consent shall become effective from the endorsed date of consent.

This Consent shall lapse unless development, the subject of this Consent, is substantially commenced within five (5) years from the endorsed date of consent. The applicant's attention is drawn to the provisions of Section 95A of the Act which may vary the above date of the lapsing of the Consent.

.....
David Christy
Acting Director
Planning and Environment

Right of Appeal
If you are dissatisfied with this decision, Section 97 of the *Environmental Planning and Assessment Act 1979* (the Act) gives you the right to appeal to the Land and Environment Court within 6 months after the date on which you received this notice.

Alternatively, you may request a review of the decision under Section 82A of the *Environmental Planning and assessment Act 1979,* within 6 months of the date of this notice (note: Section 82A is not applicable to integrated or designated development). This applies if the matter was determined by a Council officer under delegation of Council. A fee is payable. For further information please contact the Council on (02) 6023 8285.

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Conditions attached to Development Consent 10.2012.32005.4

A. General

(A1) **Development Application (modified by Development Consent No. 10.2012.32005.4)**
The development must be carried out in accordance with the attached approved plans and the particulars and statements submitted with the Development Application receipted on 13/12/2012 and amended plans receipted on 22/10/2013, except where varied by the information provided to Albury City Council on 29/11/2013, 17/02/2015, 6/03/2015 and 11/09/2018 and subject to the following conditions.

The approved plans and related documents endorsed with the Council stamp and authorised signature must be kept on site at all times while work is being undertaken.

(A2) **Crown Land – deleted by modification 10.2012.32005.2**

(A3) **Development Application - approval conditions of NSW Rural Fire Services**
The development is to be carried in accordance with the following conditions of the NSW Rural Fire Service:

(a) The development proposal is to comply with the subdivision layout identified on the drawing prepared by Esler & Associates numbered 00016917 sheets 1 to 17, dated 22 November 2012.
(b) Water, electricity and gas are to comply with section 4.1.3 of 'Planning for Bush Fire Protection 2006'.
(c) Public road access shall comply with section 4.1.3 (1) of 'Planning for Bush Fire Protection 2006'.
(d) Temporary dead end roads for staged developments shall incorporate a temporary 12 metre outer radius turning circle, be clearly signposted as dead end roads and direct traffic away from the hazard.

The General Terms of Approval form part of this development consent and are at all times to be read in conjunction with the conditions herein.
The requirements of the General Terms of Approval must be shown on the plans accompanying the Construction Certificate. *(A0040)*

(A4) **General Terms of Approval – Department of Primary Industries**
The applicant shall at all times comply with the General Terms of Approval, issues by the Department of Primary Industries Office Of Water in accordance with Section 91 of the Environmental Planning and Assessment Act 1979.
The following General Terms of Approval (reference 50 ERM2013/0057) issued on 27 May 2013, form part of this development consent and are at all times to be read in conjunction with the conditions herein.

1. These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to 10.2012.32005.1 and provided by Council:
   (i) Site plan, map and/or surveys

Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.

2. Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.

3. The consent holder must ensure that any bridge, causeway, culvert or crossing does not obstruct water flow and direction, is the same width as the river or sufficiently wide to maintain water circulation, with no significant water level difference between either side of the structure other then in accordance with a plan approved by the NSW Office of Water.

4. The consent holder is to ensure that all drainage works (i) capture and convey runoffs, discharges and flood flows to low flow water level in accordance with a plan approved by the NSW Office of Water; and (ii) do not obstruct the flow of water other than in accordance with a plan approved by the NSW Office of Water.

5. The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by the NSW Office of Water.

6. The consent holder must establish a riparian corridor along Unnamed Creeks (known as green fingers) in accordance with a plan approved by the NSW Office of Water.

7. The consent holder must ensure that there is compliance with the Maximum Harvestable Right Dam Capacity for all adjacent Crown Land, specifically in relation to "wet" detention basins.

The requirements of the Controlled Activity Approval (CAA) must be shown on the plans accompanying the Construction Certificate.

(A5) **Public Open Space**

Prior to Council issuing a Construction Certificate for Stage 3, the applicant shall indentify proposed Lot 128 (with a minimum area of 4,000m^2) for the purposes of a public open space area. This open space is to be embellished with the following as a minimum:

- Playgrounds
- Suitable and appropriate seating
- Bins
- Shade trees

This requirement is not imposed under any provision of Council's s94 Development Servicing Plan.

(A6) **Construction Certificate**

Works on the subdivision and or civil work construction for each stage is not to commence until:

- A Construction Certificate has been issued. Works are to be in accordance with Albury City Council's *Engineering Guidelines for Subdivisions and Developments Standards* and applicable conditions of this consent, a copy of which must accompany the Construction Certificate application.
- The Construction Certificate will not be issued over any part of the site requiring a Controlled Activity Approval until a copy of the approval has been provided to Council.
- A Principal Certifying Authority has been employed for the project, and
- Any other matters prescribed in the Development Consent for the subdivision and the *Environmental Planning and Assessment Act and Regulation* have been complied with.

Albury City Council is to be notified 48 hours prior to commencement of civil engineering works or clearing associated with the subdivision or civil construction works.
All works proposed must have regard to any Controlled Activity Approval. *(A061)*

(A7) **New Road Names**

This consent is not to be construed as an indication of approval of street names shown on the submitted plans together with reasons (historical or otherwise) for chosen names. A separate application shall be lodged with Council for proposed street or place names. New road names and plans of their complete proposed alignment must be presented to Council not less than six weeks before the line plan is lodged with Council for certification. This time frame gives Council a sufficient period to publicly advertise the proposed road name. Guidelines for the naming of new roads can be accessed from the Geographic Names Board of NSW website, www.gnb.nsw.gov.au *(A498)*

(A8) **Tree Preservation Order**

The development must not remove any tree unless prior approval of the AlburyCity Council has been obtained. (Tree's less than 4.5 metres in height or having a branch spread under 3 metres are exempt.) Any existing street tree within Council's road reserve shall not be removed or damaged during construction. This requirement does not apply to trees indicated to be removed on the site layout plan submitted with the Development Application.
Protective measures for vegetation to be retained shall be installed before commencement of work and maintained to post construction stage. Details to be shown on the Construction Certificate. *(C015)*

(A9) **Noise Assessment Report – amended by modification 10.2012.32005.2**
Prior to the issue of a Subdivision Certificate for Stage 2, a noise assessment report is to be prepared by a suitably qualified person and submitted to Council for approval. The Noise Assessment Report is to assess which of the approved lots (within all stages) would likely exceed the noise guidelines in clause 87 and 102 of State Environmental Planning Policy Infrastructure) 2007 in relation to noise generated from vehicles and trains using Wagga Road, Hume Highway and the railway corridor to the east of the land.

B. Prior to the Issue of a Construction Certificate

(B1) **Provision of services**
The applicant must consult with the relevant electricity, gas, water, sewerage and telecommunications carrier regarding their requirements for the provision of services to building sites and the location of existing services that may be affected by proposed works, either on-site or on the adjacent public roads. Services are to be located to minimise environmental damage. *(B069)*

(B2) **Predicted Infrastructure**
Stormwater drainage, water and sewerage reticulation and services being designed and provided in accordance with Council's *Engineering Guidelines for Subdivision and Development* to cater for predicted infrastructure demand in the locality, and impact of development on Council's assets. The design must be approved by Council under the *Local Government Act* prior to construction and, on completion, the submission to Council of transparencies of work-as-executed drawings indicating the location of those facilities. Details to be provided to Council for approval. *(B532)*

(B3) **Infrastructure Provision – amended by modification 10.2012.32005.2**
The design shall provide for:
(a) Adequate access to the Water Supply Reservoir and incorporation of overland flow paths, for stormwater flows.
(b) Deleted
(c) Water Supply Reservoir Direct Connection Mains having an 8m access strip, with a 2m boundary offset, sited and designed free of any lots.
Details demonstrating compliance are to be submitted to Council prior to the issue of a Construction Certificate for each stage as relevant. *(A996)*

(B4) **Road Design and Construction**
The design of roads shall provide for:
(a) All temporary road terminations incorporating a 12m circular turning head designed so that traffic may enter and exit in one motion.
(b) The internal road network accommodating for larger vehicles, such as public transport, service and construction vehicles (e.g. Garbage trucks, delivery trucks).
(c) Bus stop facilities within the estate for the convenience of the user in accordance with relevant guidelines.
(d) Internal movement of vehicles and connectivity to nearby subdivisions to remove the need to access arterial roads.
(e) Adequate drained access from to the existing water tank
(f) Road widths designed in accordance with *Councils Engineering Guidelines for Subdivisions.*
(g) Street design to include access to the Water Tanks and incorporate overland flow paths for stormwater flows.

The internal road network and roadside environment should be designed, constructed and maintained to provide a safe environment for all road uses and to encourage compliance with the desired speed limit through the subdivision in accordance with the NSW speed zoning guidelines. Details to be provided to Council for approval prior to issue of any Construction Certificate

(B5) **Subdivision – traffic construction and design**
The proposed intersections and road designs shall be constructed in accordance with the requirements of the *Ettamogah Rise – Traffic Forecast and Intersection Layout Proposals* dated October 2010 and revised March 2011, May 2011 and April 2013 prepared by Esler & Associates and to Council's satisfaction.

(B6) **Access - turning area in cul-de-sac**
Sufficient area should be provided at the head of cul-de-sac streets to enable a standard vehicle (i.e. garbage truck and or fire truck) to turn. Details are to be provided with the Construction Certificate for each stage. *(B003)*

(B7) **Footpath and Bicycle Ways – amended by modification 10.2012.32005.2**
Provision shall be made for footpaths in accordance with Table 10.2 of *Albury Development Control Plan 2010*, having a minimum width of 1.5 metres. Footpaths shall be constructed in concrete, with a non-skid surface to facilitate ease of use by the disabled, aged and the very young. The design shall:

(a) Ensure connection to those footpaths provided in Stage One
(b) Provision of a bicycle way from Wagga Road to Marlborough Street then to Fenchurch Drive, ending at Central Reserve Road. The bicycle way shall be constructed 2.0 metres wide and 125 millimetres thick in concrete

Details are to be submitted prior to the issue of any Construction Certificate. *(B995)*

(B8) **Access Way (handle) design – two lots**
The minimum width of an access handle for a single residential battle axe lot shall be 3.5 metres with provision therein for a metre all weather internal drive adequate pavement edge and provision for services. *(A998)*

(B9) **Share Accessway Dual Hatchet shaped Allotments**
Shared accessways to dual hatchet shaped allotments shall have a width not less than five metres with provision made therein for a one metre wide service strip, 3.5 metre wide all weather paved internal road and adequate pavement edge. *(D516)*

(B10) **Bushfire - Asset Protection Zones – deleted by modification 10.2012.32005.2**

(B11) **Landscaping Plan**
A detailed Landscape Plan shall be submitted with each Construction Certificate application that includes:

(a) Identification and accurate mapping of all trees within the subdivision/block in health and condition suitable for retention, regardless of location;
(b) Report detailing species, health, condition and hazard rating of trees identified as suitable for retention;
(c) Trees identified for retention to be clearly tagged on-site to allow for assessment by Council officers;
(d) Compliance with Planning for Bushfire Protection 2006
(e) A street tree planting plan detailing species and location; and
(f) Methods of tree protection during engineering works for trees identified to be retained.

The works relating to the planting of the street trees and associated landscaping, are to integrate with the street design, are required to be completed to the satisfaction of Council's Parks & Recreation Team, prior to the issue of the Subdivision Certificate. *(G050)*

(B12) **Stormwater drainage detention**
A stormwater drainage detention system is to be provided to the subdivision. The system is to be designed to reduce developed discharges to pre-development discharges for all storms up to and including the 1:100 year event. The weir and wall of the basin are to be designed to withstand the effects of a 1:500 year event. *(B542)*

(B13) **Stormwater Drainage Design**
Storm water drainage is to be prepared by a suitably qualified person showing stormwater from the site area and development being collected and disposed of to a lawful point of adequate capacity without impacting on adjoining or downstream properties. The design shall:

(a) Provide for the failure of the existing water tank.
(b) Give consideration of periodic full scouring from existing water tank and site.
(c) Be in accordance with Australian Standard 3500.3, and Council's Engineering Guidelines for Subdivisions and Development Standards.
(d) Show how the stormwater generated by the site, and other inter allotment overland flow water entering onto the site, is to be collected within the site and conveyed in a suitable pipeline to the most appropriate point of discharge.
(e) Provide on-site detention to limit stormwater discharge from the site to pre developed flows.
(f) Detail the provision and maintenance of overland flow paths.
(g) Incorporate water sensitive design principles and where practical, integrated water cycle management.
(h) Ensure that the development either during construction or upon completion, does not impede or direct natural surface runoff so as to impede or divert natural surface runoff so as avoid environmental impact and nuisance to private property and the public domain.

Details for approval are to be included with the plans and specifications to accompany any Construction Certificate.

(B14) **Cut and Fill**
Any land fill over 600 millimetres will be subject to the submission and approval of a 'land fill' plan and shall include existing contours, elevations and finished design contours, overland flow paths, adjoining properties that will be affected by the disturbance and measures to be undertaken, to ensure the land filled areas will not adversely affect neighbouring properties and the physical environment.

Where building areas are to be filled the land is to be stripped of all topsoil. Fill is to be placed in layers not exceeding 300mm of loose material and is to be compacted to 95% of standard compaction. Tests are to be taken on every layer and are to be verified by a NATA registered soils laboratory and evidence submitted to Council. Test locations shall be shown on the Works as Executed plans. *(D424)*

(B15) **Reticulated Water Service Pressure above 210m AHD (modified by Development Consent No. 10.2012.32005.3)**
Prior to the issue of a Construction Certificate for Stage 2 (exclusive of the overall water main supply network), a Reticulated Water Assessment Report is to be prepared by a suitably qualified person and submitted to, and approved by, Council. The Reticulated Water Assessment Report is to demonstrate through proposed services location and network design that all lots within all stages will receive adequate service pressure for domestic use and fire protection. The report is to identify which lots, if any, would not meet a preferred pressure at a dwelling site of 30 metres per head, including at peak instantaneous demand. For such lots a break pressure tank is to be constructed at the frontage of each allotment for the purpose of obtaining water from the main by a low flow line, with details to be supplied prior to the issue of a Construction Certificate for each affected stage as relevant.

The reticulated water supply network for Stage 2 shall be the subject of a separate Construction Certificate for civil works, supported by detailed design plans and calculations, as required, and shall be consistent with the approved Reticulated Water Assessment Report and comply with all relevant conditions of this consent including the requirements of Department of Primary Industries Office of Water (where applicable). All works relating to the reticulated water supply for Stage 2 network shall be completed prior to the issue of a Subdivision Certificate for Stage 2.

(B16) **Contamination (modified by Development Consent 10.2012.32005.4)**
Prior to the issue of a Construction Certificate for Stages 8 and 9, a Preliminary Investigation Report is to be prepared by a suitably qualified person in accordance with clause 6 of State Environmental Planning Policy 55 – Remediation of Land and Managing Land Contamination Planning Guidelines: SEPP 55 – Remediation of Land (DUAP & EPA, 1998) and submitted to Council. The report is to investigate the suitability of land in those stages for residential use due to known past agricultural activities with any recommended remedial works arising being completed prior to the issue of a Subdivision Certificate for Stages 4 and 8 with documentary evidence of same being provided to Council. *(B998)*

(B17) **Bushfire Safety – amended by modification 10.2012.32005.2**
Bushfire protection measures being incorporated in the construction plans or into a separate Bushfire Management Plan so as to minimise risk to occupants of proposed lots. The plan shall include the above requirements of the Bushfire Safety Authority issued by the Rural Fire Service and, be based on the advice and recommendations within the Bushfire Assessment Report submitted with this application except where modified by the Bushfire Safety Authority. Any relevant landscape or vegetation management plan shall be fully integrated with the bushfire plan.

(B18) **Site Fencing Plan – amended by modification 10.2012.32005.2**
A site fencing plan is to be submitted for the approval of Council with any Construction Certificate application. In particular, fencing arrangements are to ensure that any fencing providing a lot sharing the boundary with the Albury Environmental Lands (AEL) and Lot 109 DP 1146428 shall

- Create a consistent appearance when viewed from the environmental lands within lot 109 DP 1146428.
- Satisfy the controls in Part 1.3.4 of Appendix E: Ettamogah Development Plan of the Albury Development Control Plan 2010
- Have the approval of Crown Lands, a copy of which shall accompany the application to Council.

- Be subject to a Section 88B Instrument over the subject lots requiring future replacement of any such fencing to be consistent (in terms of colour, materials and style) with that provided in the original development.

(B19) **Civil Construction Works**
All civil construction works required by this consent shall be in accordance with Albury City Council's "*Engineering Guidelines for Subdivision and Development Standards*". No engineering or civil works are to be undertaken until plans and specifications have been approved by Council and any applicable fees paid. *(B439)*

(B20) **Work Management Plan**
Prior to the issue of a Construction Certificate for Stage 2, a Works Management Plan (WMP) for the site shall be submitted to Council's engineering and environmental departments for consideration and approval.

The WMP is to:
- Address all environmental aspects of the development's construction and operational phases including the guiding principles of the Albury Environmental Lands Draft Plan of Management, and
- Recommend any systems/controls to be implemented to minimise the potential for any adverse environmental impact(s), and
- Incorporate a programme for ongoing monitoring and review to ensure that the WMP remains contemporary with relevant environmental standards.

The WMP should include but is not limited to the following:
- Construction Traffic Management Plan prepared in accordance with AS1742.3 by an appropriately qualified person;
- Soil and water management controls. Erosion and sediment control measures shall be provided and maintained during the construction of the subdivision in accordance with Council's *Soil and Water Management Guidelines for Subdivisions*. Approved measures shall be implemented prior to commencement and maintained during construction and until all disturbed areas have been stabilised and fully revegetated;
- Protective measures for vegetation to be retained which shall be maintained to post construction stage. In particular this shall include protection measures for the existing stand of vegetation (Acacia Genistifolia) located in the Wagga Road road reserve;
- Dust suppression controls. Dust controls measures must be utilised during work, to control the emission of dust from the site during work.
- Control of noise arising from the works in accordance with the requirements of the *Protection of the Environmental Operations Act 1997* and guidelines contained in the New South Wales Environmental Noise Control Manual.

The relevant aspects of the approved WMP shall be implemented during the relevant phase(s) of the development.

(B21) **Construction of northern access in Stage 5 (added by Development Consent 10.2012.32005.4)**
To provide for suitable access between Fenchurch Street and Gerogery Road, prior to the release of a Construction Certificate for Stage 5 detailed design plans are to be provided for:
- Construction of Fenchurch Street (between Liverpool Avenue and Central Reserve Road);
- An appropriate intersection treatment between Fenchurch Street and Central Reserve Road;
- Construction of Central Reserve Road (between Fenchurch Street and Gerogery Road) to Council's urban road standards; and
- Construction of an appropriate upgrade of the intersection of Central Reserve Road and Gerogery Road.

All works are to be designed in accordance with Council's adopted urban road standards and all work is to be completed as part of the Stage 5 subdivision works.

C. Prior to any work commencing on the site area

(C1) **Prior to commencement of Construction Works**
Two days before any site works, building or demolition begins, the applicant must:

(a) Provide *Notice of commencement of work and appointment of Principal Certifying Authority*; to the Council.
(b) Notify the adjoining owners that work will commence.
(c) Notify *the Council* of the name, address, phone number and licence number of the builder.
(d) Erect signs at the front of the property stating that unauthorised entry is prohibited and showing the builder's name, licence number and site address.
(e) Provide a temporary on-site toilet.
(f) Protect and support any neighbouring buildings.
(g) Protect any public place from damage, obstruction or inconvenience from the carrying out of the consent.
(h) Implement measures to protect existing trees.
(i) Implement controls to prevent soil erosion and pollution.
(j) Prevent any substance from falling onto a public place.
(k) Follow any other conditions prescribed in the *Environmental Planning and Assessment Regulation 2000*. *(C426)*

(C2) **Traffic Safety during Construction or Subdivision Works**
No work is to commence on site until such time as a person accredited to prepare traffic control plans in accordance with AS1742.3 and the Roads and Traffic Authority's publication "Traffic Control at Worksites" has certified a Traffic Control Plan for the development/site. The Traffic Control Plan is to be implemented during the construction phase of the development and a copy of the plan is to be available on site at all times. A copy of the Traffic Control Plan is to accompany the Notice of Commencement to be submitted to Council 2 days before any work is to commence on site. *(C408)*

(C3) **Protection of Environmental Protection Zoned land**
During work, impact amelioration measures are to be implemented to ensure the ecological, scientific, cultural or aesthetic values of the land and adjoining lands including the Wagga Road lands, are protected, and that its environmental management is not compromised. Signage is to be provided directing all vehicular traffic away from the areas.

(C4) **Protection of retained Vegetation**
Protective measures for vegetation to be retained shall be installed before commencement of work and maintained to post construction stage.

(C5) **Demolition - compliance and disposal to approved landfill site**
All demolition works are to be conducted in accordance with the provisions of AS 2601-2001 *"The Demolition of Structures"*. Prior to demolition, all services are to be suitably disconnected and capped off or sealed to the satisfaction of the relevant service authority requirements. All demolition and excavated material is to be disposed of at a Council approved site or waste facility. Details of the proposed disposal location(s) of all excavated material from the development site is to be provided to Albury City Council prior to commencement of demolition. *(C420)*

(C6) **Backfilling of Earth Dams**
A dam fill plan shall be prepared by a suitably qualified person and should indicate the extent of filling, original and final contours, and depth of filling in maximum 0.5m increments. The dam fill plan shall accompany a report prepared by a suitability qualified engineer, detailing the type of fill material used, the compaction levels achieved, and classification in accordance with the provisions of AS2870 Residential Slabs and Footings. *(C998)*

D. During Construction or Works

(D1) **Management of Work**
During construction, work must be conducted in a manner so as not to be injurious to health and amenity by reason of noise, vibrations, smells, dust, stormwater runoff, sediment loss, placement of construction materials and wastes, rubbish, traffic generated, off-site 'vehicle tracking', hours of work and the like. *(D033)*

(D2) **Maintenance of Soil Erosion and Pollution Controls**
All measures specified in Council's *Soil and Water Management Policy* to minimise the effects of soil erosion and pollution are to be installed then maintained until disturbed areas are rehabilitated and landscaped. Council may issue infringement notices incurring a monetary penalty where measures are not provided or maintained. *(D522)*

(D3) **No Water passing over another Allotment**

During construction a piped interlot drainage system shall be installed to serve all allotments that cannot be drained to a drainage reserve or road table drain without water passing over another allotment. Installation shall be in accordance with the approved construction plan, with easements not less than 3.0 metres wide being created over the system. *(D486)*

(D4) **Spray-grass**
All land that has been disturbed by earthworks is to be 'spray-grassed' or similarly treated, prior to issue of a subdivision certificate, to establish a grass cover. *(D063)*

(D5) **Runoff and Sediment Control**
During construction runoff detention and sediment interception measures are to be applied to the site area so as to reduce flow velocities and prevent sediment escaping from the site or entering any downstream drainage easement or natural or artificial water bodies. *(D524)*

(D6) **Urban Street Numbers**
During construction the subdivider shall place, in a prominent location at the front of each lot, an approved street number. These numbers and their allocation are to be obtained from Council's mapping section. New streets are to have a separate approval from Council for a street name. *(D545)*

(D7) **Street Signs**
During construction, the applicant shall install such street name signs, regulatory signs and advisory signs as may be reasonably required for such development. Appropriate names for the streets are to be selected from AlburyCity Council's approved street names list. If you do not agree to any of those listed a separate application shall be lodged with Council seeking approval for street names. The regulations imposed under the Roads Act require that these street names are advertised on two occasions; firstly as a proposal, and secondly as an official naming. This process means that you must pay the required advertising fee to Council before the Council can commence the process to name the street. *(G428)*

(D8) **Construction – inspections**
Inspections are to be conducted in accordance with Clause 109E(3)(d) of the *Environmental Planning & Assessment Act 1979* and Section 162A of the *Environmental Planning & Assessment Regulation 2000* and as required by the Principal Certifying Authority. *(D027)*

(D9) **Construction Hours of work (added by Development Consent 10.2012.32005.4)**
Demolition, subdivision or construction works will be restricted to the following hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines:
(a) Mondays to Fridays, 7.00am to 6.00pm
(b) Saturdays, 8.00am to 1.00pm
(c) No work is permitted on Sundays and Public Holidays.
Construction works that are carried out in the open that involve the use of heavy vehicles, heavy machinery and other equipment likely to cause offence to adjoining properties is to be restricted to the above hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines.
Note: The provisions of the Protection of the *Environment Operations Act, 1997* in regulating offensive noise also apply to all construction works. *(D422)*

E. Subdivision Certificate

(E1) **Subdivision - S94 and S64 contributions table**
Pursuant to Section 94 of the *Environmental Planning and Assessment* Act and Section 64 of the *Local Government Act,* Section 94 and Section 64 monetary contributions are required to be paid for the development.
The basis of the contributions is as follows:

Large Lots (greater than 600m^2)

Service/Facility	Rate Per Lot	Account Number	Hot Key
Water	$2,875.00	00044.0820.800	270
Sewer	$3,923.00	00225.0822.800	271
Roads, Traffic & Transport	$1,476.00	01690.0802.800	277
Open Space & Recreation	$422.00	01936.0810.800	278
Community & Cultural Facilities	$530.00	00335.0812.800	279

Contributions are due prior to the release of the Subdivision Certificate for each stage in accordance with any staging strategy, and will be calculated or recalculated at the rate applicable under the plans current at the time of payment. A copy of Council's Development Servicing Plans, are available for inspection at Council's Offices.

The Principal Certifying Authority shall ensure the payment of the contributions required by this consent is made, prior to the release of any Subdivision Certificate. *(G300)*

(E2) **Subdivision Certificate Inspection Fee**
Prior to the issue of any Subdivision Certificate, the applicant shall pay to Council an Inspection Fee equivalent to 2.2% (includes GST) of the contract price of the subdivision works but not less than One Hundred and Fifty Dollars ($150) for the cost of providing Council Inspection of Works. ***(For office use only - HK 63)*** *(G306)*

(E3) **Subdivision - evidence of service supply**
Prior to the release of any Subdivision Certificate the following documentary evidence is to be obtained and forwarded to the Principal Certifying Authority:
(a) A Notification of Arrangement issued by the relevant electricity supplier.
(b) A letter of compliance from the relevant telecommunications carrier.
(c) A letter of compliance from the relevant gas supplier. *(G408)*

(E4) **Stormwater Drainage / Detention System**
Prior to the issue of the Subdivision Certificate for each stage, the on-site stormwater detention (OSD) system must be certified by a Consulting Engineer and include a "Works as Executed" (WAE) drawing certified by a Registered Surveyor and overdrawn in red on a copy of the approved (OSD) system plans. Additionally a Compliance Certificate is to be issued by an Accredited Certifier in Civil Works registered with the Institute of Engineers Australia, stating that the works are in accordance with the approved plans.

(E5) **Compliance with general terms of NSW Rural Fire Service**
Evidence must be provided with the application for a subdivision certificate that all requirements contained within the conditions of the Bush Fire Safety Authority listed in this consent, have been met.

(E6) **Subdivision - submit value of civil works and any maintenance bonds**
Prior to issue of any Subdivision Certificate, the applicant shall submit an itemised monetary value of civil works for the inclusion in Council's Asset Management System and any necessary maintenance bonds. *(G310)*

(E7) **Compliance with Conditions**
Prior to the issue of any Subdivision Certificate the applicant must submit to Council, a letter outlining relevant conditions of consent and how each of the conditions have been implemented and/or satisfactorily addressed, so as to confirm compliance with all conditions of the subject consent.
Note: Council will not issue a Subdivision Certificate unless all work has been completed or agreement reached in accordance with s109J(2) of the Environmental Planning and Assessment Act. *(G001)*

(E8) **Works – as – Executed Plan**
Prior to the issue of any Subdivision Certificate, a works – as – executed plan in both hard copy and electronic form (.dwg files or equivalent) in accordance with Council's current Engineering Guidelines for Subdivisions and Development Standards shall be submitted to Council. The plans shall be referenced to the approvals covering, the works constructed.

(E9) **Submission of Section 88B Instrument – amended by modification 10.2012.32005.2**
Prior to the issue of any Subdivision Certificate a Section 88B Instrument shall be submitted for approval. The final plan of subdivision and accompanying Section 88B Instrument are to provide for:

(a) Drainage, water, sewer and service easements not less than three (3) metres wide being created where required and/or as directed by council so that adequate access to, and protection of, services and overland flow paths will be ensured.
(b) Deleted.
(c) If the Noise Assessment Report described in Condition A9 identifies approved lots as likely to exceed the noise guidelines in clause 87 and 102 of State Environmental Planning Policy (Infrastructure) 2007 in relation to noise generated from vehicles and trains using the Wagga Road, Hume Freeway and railway corridor to the east of the land, then such lots are to be

identified as requiring habitable buildings to be designed and constructed using appropriate measures to ensure that the relevant LAeq levels are not exceeded.

(d) Restriction as to user indicating that any buildings constructed on proposed lots 284-286, located opposite the 'Muniong' property shall be sited to have a southern lot boundary setback not less than ten (10) metres.

(e) Direct access from allotments to Wagga Road is to be denied. A covenant is to be created, with the Council and Crown Lands empowered to unlift, denying vehicular and pedestrian access directly to Wagga Road.

(E10) **Subdivision Certificate Application**

Prior to the issue of the Subdivision Certificate, a complete Subdivision Certificate form, a final plan of subdivision prepared in accordance with the requirements of the Conveyancing Act 1919 are to be submitted to Council. Five copies of the final plan of subdivision, Section 88B instruments and, written evidence that all conditions of consent satisfied are to be submitted.

Note: Council will not endorse restrictions as to user other than those required under these conditions or as approved in any extant development consent. *(G498)*

(E11) **Public Open Space**

The establishment of Lot 128 (required by condition A5) is to be completed to Council's satisfaction prior to the issue of a Subdivision Certificate for Stage 3. The land is to be dedicated to Council as part of the Subdivision Certificate for Stage 3.

F. Reasons for Conditions

(F1) **The above conditions have been imposed:**

(a) To ensure compliance with the terms of the *Environmental Planning and Assessment Act 1979, Rural Fires Act 1997* and*, Water Management Act 2000.*

(b) Having regard to Albury Development Control Plan 2010, Council's Engineering Guidelines for Subdivisions and Development Standards and, Council's duties of consideration under Section 79C and 80A of the Act.

(c) To preserve and enhance environmental assets, protect biodiversity values and, ensure waterway health.

(d) To minimise fire risk to occupants of proposed lots and to ensure that radiant heat levels of buildings are below critical limits and to prevent direct flame contact with a building.

(e) To protect and enhance the environmental quality of the locality, and minimise environmental impact.

(f) To provide for an attractive and safe environment, and preserve areas of environmental significance.

(g) To minimise health risk to neighbouring residents, workers, the environment and, ensure public safety and health.

(h) To ensure an appropriate level of provision of amenities and services occurs to occupants of sites and, for the protection of buildings during and after the passage of a bush fire.

(i) To ensure gas and electricity services are located so as not to contribute to the risk of fire to a building and, that safe operation access to structures and water supply for emergency services.

(j) To improve the amenity, safety and environmental quality of the locality.

(k) Having regard to environmental quality, the circumstances of the case and the public interest.

(l) To help retain environmental resources and enhance streetscape quality.

(m) Ensure compatibility with adjoining and neighbouring land uses and built form.

(n) To protect public interest, the environment and existing amenity of the locality.

G. Advisory and Ancillary Matters

(G1) **Understanding**

It is the responsibility of the applicant to check, understand and seek assistance where needed so as to ensure full compliance with the conditions of this Development Consent. Please contact the AlburyCity Planning & Environment Group on 02 6023 8285 if there is any difficulty in understanding or complying with any of the above conditions. *(I010)*

(G2) **Alterations after Consent**

Any alterations to the proposed development shall be submitted to AlburyCity Council for further assessment and approval prior to the issue of Development Consent. If such alterations are contemplated after the consent is issued, then details shall be subject to a development application for the modification of the Development Consent. *(I005)*

(G3) **Workcover**
All work carried out under this Consent should be done in accordance with WorkCover requirements including the *Occupation Health and Safety Act 2000* and subordinate regulation, codes of practice ad guidelines that control and regulate the development industry. Further information can be obtained from WorkCover NSW's website at http://workcover.nsw.gov/industry/construction/default.htm. *(I026)*

(G4) **Disposal of asbestos at Albury Landfill**
The costs associated with the disposal of asbestos at the Albury Landfill site must be determined by contacting the officer on duty at the AlburyCity land fill Depot. The contractors involved with the disposal of the asbestos at the Albury Landfill site is to advise the weigh bridge office at least 24 hours prior to entry to enable specific burial of the waste. The weighbridge office may be contacted on 02 60255777 during office hours. *(I125)*

(G5) **Protection of the Environment**
It is an offence under the provisions of the *Protection of the Environment Operations Act 1997* to act in a manner causing, or likely to cause harm to the Environment. Anyone allowing material to enter a waterway or leaving material where it can be washed off-site may be subject to a penalty infringement notice ("on-the-spot fine") or prosecution. *(I999)*

(G6) **General Advice – Bush Fire Safety Authority**
This approval is for the subdivision of the land only. Any further development application for class 1, 2 & 3 buildings as identified by the 'Building Code of Australia' must be subject to separate application under section 79BA of the EP&A Act and address the requirements of 'Planning for Bush Fire Protection 2006'.

(G7) **Amendment to controlled activity approval plans or documents**
The Office of Water shall be notified if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works on waterfront land (which includes (i) the bed of any river together with any land within 40 metres inland of the highest bank of the river, or (ii) the bed of any lake, together with any land within 40 metres of the shore of the lake, or (iii) the bed of any estuary, together with any land within 40 metres inland of the mean high water mark of the estuary).

(G8) **Prescribed Conditions**
Prescribed conditions in force under the *Environmental Planning and Assessment Act* and Regulation must be complied with. *(I998)*

(G9) **Construction Certificate - Long Service Levy**
Prior to the issue of a Construction Certificate, the Building Industry Long Service Levy is to be paid in accordance with the provisions of Section 34 of the *Building and Construction Industry Payments Act 1986*. This fee is payable on all projects in excess of $25,000 in value and is calculated at the rate of 0.35% of the current value of works. *(B105)*

(G10) **Underground Assets – Dial Before you Dig**
Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (This is the law in NSW). *(I130)*

(G11) **Telstra Assets**
Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution. *(I131)*

(G10) **Cost of Works**
Any works associated with the proposed development shall be at no cost to the Roads and Maritime Services (RMS).

* * *

ETTAMOGAH RISE
DA PLANS
STAGES 2–9

OVERALL STAGE 2–9 STAGING PLAN

Modification of Development Consent 010.2012.00032005.004 Endorsed: 29 October 2013 Date Modified: 14 November 2018

David Christy
Acting Director
Planning & Environment

Road design and intersection designs to be provided with Construction Certificate for Stage 5. All roadworks to be completed as part of Stage 5. See Condition (B21)

eslers & ASSOCIATES
SURVEYORS CIVIL ENGINEERS DEVELOPMENT CONSULTANTS
598 Macauley Street, Albury
p: (02) 6021–1322
64 Hammond Avenue, Wagga Wagga
p: (02) 6921–3312
31 Baker St, Wangaratta
p: (03) 5721–5688
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w: www.eslers.com.au
e: engineering@eslers.com.au
FS520879

AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 2–9 DA PLANS (REV–J)	08/10/12
2. STAGE 2 ALLOTMENT ADJUSTMENT	02/11/12
3. STAGE 2–9 DA PLANS (REV–K)	02/11/12
4. STAGE 2–9 DA PLANS (REV–L)	16/11/12
5. EX FEATURE & SURVEY PLAN	20/11/12
6. STAGE 2–9 DA PLANS (REV–M)	22/11/12
7. STAGE 2–9 DA PLANS (REV–N)	17/10/13
8. AMENDED STREET NAMES	18/11/16
9.	
EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2.	
3.	
AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2.	
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2012

PROJECT No: 00016917 **REV: N**

SHEET 1 OF 17 A1

ROAD RESERVE DETAIL

- 13m ROAD RESERVE — 3.5m NATURESTRIP, 6m INVERT–INVERT
- 19m ROAD RESERVE — 5.5m NATURESTRIP, 8m INVERT–INVERT
- 22m ROAD RESERVE — 5.5m NATURESTRIP, 11m INVERT–INVERT
- 26m ROAD RESERVE — 4.5m NATURESTRIP, 2*6.6m INVERT–INVERT, 3.8m MEDIUM STRIP

STAGE	min 4,000sq.m ALLOTMENTS	min 1,500sq.m ALLOTMENTS	TOTAL ALLOTMENTS
2.	4	45	49
3.	6	47	53
4.	0	43	43
5.	0	42	42
6.	40	0	40
7.	35	0	35
8.	31	22	53
9.	22	0	22
	138	199	337

STAGE 1 IS NOT PART OF CURRENT DA. STAGE 1 APPROVED VIA DEVELOPMENT CONSENT NO. 10.2010.30657.1 (4 JULY 2011)

BAR SCALE (NOT TO SCALE) 0 25 50 100 200

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DATE SHEET PRINTED:– (Wednesday, September 05, 2018)

ETTAMOGAH RISE
DA PLANS
STAGES 2-9

LAYOUT STAGE 4

esler & ASSOCIATES

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DEVELOPMENT CONSULTANTS

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p: (03) 5721-5688
f: (02) 6021-8563
w: www.eslers.com.au
e: engineering@eslers.com.au

FS520879

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AERIAL PHOTOGRAPHY SOURCE:-	DATE:
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2.	
3.	

AlburyCity

Modification of Development Consent 010.2012.00032005.004
Endorsed: 29 October 2013
Date Modified: 14 November 2018

David Christy
Acting Director
Planning & Environment

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:-

APPROVED:-

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV-2012

PROJECT No: 00016917 REV: N

SHEET 10 OF 17 A1

STAGE 1 IS NOT PART OF CURRENT DA. STAGE 1 APPROVED VIA DEVELOPMENT CONSENT NO. 10.2010.30657.1 (4 JULY 2011)

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ETTAMOGAH RISE
DA PLANS
STAGES 2–9

LAYOUT STAGE 5

esler & ASSOCIATES

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DEVELOPMENT CONSULTANTS

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3.	

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APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2012

PROJECT No: 00016917 **REV: N**

SHEET 12 OF 17 A1

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Albury City

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David Christy
Acting Director
Planning & Environment

STAGE 1 IS NOT PART OF CURRENT DA. STAGE 1 APPROVED VIA DEVELOPMENT CONSENT NO. 10.2010.30657.1 (4 JULY 2011)

CENTRAL RESERVE ROAD

GEROGERY ROAD

THIMBLE CT

FENCHURCH DRIVE

STRAND TERRACE

CANNON CT

FLEET COURT

KENT STREET

PENTONVILLE STREET

LIVERPOOL AVENUE

STAGE 5

APZ 10m

851 4082sq.m
852 4144sq.m
850 4708sq.m
853 4018sq.m
849 4036sq.m
845 4584sq.m
846 4112sq.m
848 4034sq.m
847 4029sq.m
802 4028sq.m
804 4025sq.m
805 2045sq.m
803 3041sq.m
801 4019sq.m
844 4081sq.m
843 4052sq.m
842 09sq.m
806 1507sq.m
807 1510sq.m
808 1507sq.m
809 1520sq.m
810 1550sq.m
811 1584sq.m
812 1513sq.m
813 1520sq.m
814 1506sq.m
815 1541sq.m
816 1504sq.m
817 1672sq.m
522 1566sq.m
523 1521sq.m
524 1520sq.m
525 1508sq.m
526 1812sq.m
527 2260sq.m
528 1943sq.m
529 1522sq.m
530 1517sq.m
533 1523sq.m
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531 1751sq.m
521 1632sq.m
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520 2160sq.m
509 1709sq.m
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510 1502sq.m
518 1461sq.m
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423 1529sq.m
426 1512sq.m
507 1506sq.m
506 1515sq.m
505 1513sq.m
504 1513sq.m
503 1513sq.m
502 1513sq.m
501 1513sq.m
BASIN 445 3669sq.m
434 1512sq.m
435 1513sq.m
436 1513sq.m
437 1513sq.m
438 1513sq.m
439 1512sq.m
440 1512sq.m
441 1513sq.m
442
820 2021sq.m
819 1628sq.m
818 1520sq.m
534 1512sq.m
535 1512sq.m
536 1503sq.m
821 1572sq.m
822 1781sq.m
417 1751sq.m
823 1603sq.m
416 1580sq.m
824 1536sq.m
415 1519sq.m
825 1519sq.m
414 1525sq.m
832 4005sq.m
831 4033sq.m
826 1550sq.m
413 1512sq.m
830 4017sq.m
411 1544sq.m
412 1513sq.m

N
W E
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H10 0 20 40 60
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DOC19/144325

DOC18/137746

APPENDIX C:

Traffic Impact Assessment

Spotto CONSULTING

people-oriented traffic and transport solutions

Traffic Impact Assessment

Residential Subdivision

Ettamogah Rise

Springdale Heights/Ettamogah, NSW

May 2019

DOC19/144325

Prepared by:

Spotto CONSULTING

For:

The Diocese of Wagga Wagga

Ref	Version	Date	Revision Details	Author
P0037	A	21 September 2018	Draft	SWS
	B	24 October 2018	Final	SWS
	C	21 May 2019	Final – Updated Plans	SWS

CONTENTS

1 INTRODUCTION

Spotto Consulting have been engaged by The Diocese of Wagga Wagga to complete a Traffic Impact Assessment. The study is in response to a proposed development at the Ettamogah Rise Residential on Wagga Road, Springfield Heights/Ettamogah. The development proposes to increase the currently approved number of residential allotments from 386 to 413. Internal road layout and access to surrounding roads will remain unchanged.

The purpose of the assessment is to determine the impact of the proposed development on the external road network and, where necessary, identify appropriate mitigating works.

The assessment concluded that:

- Traffic surveys and modelling of the key intersections of Wagga Road and Windsor Avenue, as well as Wagga Road and Thurgoona Drive/Kaitlers Road show that both intersections currently operate at a good Level of Service (LOS C or better), with midblock level of service on Wagga Road south of the site also being good (LOS B or better);
- The proposed development involves changing the number and size of the lots, with the number of residential allotments increasing by 27 from 386 to 413;
- The internal road layout and access to the surrounding road network will remain generally the same as the approved layout;
- The proposed development will result in an increase in traffic volume of 230 vehicles per day (22 vehicles per hour in the AM peak period and 25 vehicles per hour in the PM peak period) over the current approved layout;
- There is sufficient capacity in the surrounding road network and key intersections to accommodate the additional traffic generated by the proposed development, in addition to catering for the next ten years growth in existing traffic volumes on the surrounding road network. Modelling shows that intersections and midblock levels of service will continue to be an acceptable level of C or better;
- Parking requirements can be met by providing off-street parking in accordance with Albury Development Control Plan Part 17 – Off-Street Car Parking; and
- There will be no significant adverse impact on the movement of pedestrians and cyclists.

It is recommended that:

- The left turn lane from Wagga Road into Windsor Avenue be extended to comply with the requirements for a full Auxiliary Left Turn (AUL) lane, requiring an extension approximately 90m to the south (assuming Wagga Road remains zoned at 100km/h in future).

2 EXISTING CONDITIONS

2.1 Site

The site is located approximately 8km north of the Albury CBD. Spanning the suburbs of Springdale Heights and Ettamogah, the site is located on the western side of Wagga Road, between Kaitlers Road and Gerogery Road. Figure 1 shows the location of the site.

Figure 1: Locality Plan

The site has a total area of 121.82 hectares and is bounded by Wagga Road to the east, Gerogery Road and Central Reserve Road to the north, and also by environmental land to the south and west.

The site has a development consent for subdivision into 386 residential lots over nine stages, with lot sizes typically ranging from 1,500m^2 up to 4,000m^2. A copy of the overall approved plan for the site is included in Appendix A. Currently two of the nine stages are complete, with Stage 3 under construction at the time of writing. The primary access to the site is provided via the intersection of Wagga Road and Windsor Avenue, with a second access approved to the north onto Central Reserve Road.

2.2 Surrounding Land Use

The site is currently zoned R2 Low Density Residential under the Albury Local Environmental Plan 2010. Surrounding land zones and their general usage include:

- E3 Environmental Management – Environmental lands to the west and south;
- SP2 Infrastructure – Water supply, train line and Hume Highway;
- SP1 Special Activities – Military land to the north-west; and
- B7 Business Park – Several light industrial/commercial developments are located on the eastern side of Wagga Road.

Further to the north and south is more commercial/industrial land, while residential areas lie further east and west.

2.3 Road Network

2.3.1 Wagga Road

Wagga Road forms part of the former Hume Highway route. It currently runs from the "Fiveways" intersection with Union Road and Mate Street in Lavington, northwards past the site to the Hume Highway at the Davey Road interchange.

In the vicinity of the site, Wagga Road is a two-lane, two-way rural sealed road. With a variable road reserve width (minimum 70m), Wagga Road has two 3.5m wide travel lanes with 1.5m wide sealed shoulders. Grassed verges on either side contain table drains for conveying stormwater runoff, as well as an avenue of trees. Street lighting is present only at key intersections. The speed limit is the default rural speed limit of 100km/h.

Wagga Road is the responsibility of Albury City Council. With limited direct property access, and approval as a B-Double route, Wagga Road prioritises through movement over access.

Figure 2: Looking south along Wagga Road, showing the intersection with Windsor Avenue

Figure 3: Looking north along Wagga Road at the intersection with Gerogery Road

2.3.2 Gerogery Road

Gerogery Road forms part of the former Olympic Way route. It currently runs from Wagga Road at Ettamogah, northwards past Central Reserve Road and the Nexus Industrial Estate to the town of Gerogery where it meets the Olympic Highway.

In the vicinity of the site, Gerogery Road is a two-lane, two-way rural sealed road. With a variable road reserve width (minimum 30m), Gerogery Road has two 4.0m wide travel lanes with 0.5m wide sealed shoulders. Verges on either side contain table drains for conveying stormwater runoff, with mature native vegetation present within 5m or more of the edge of the carriageway. There is currently no street lighting along the route. The speed limit near the site is 80km/h.

Gerogery Road in the vicinity of the site is the responsibility of Albury City Council. With limited direct property access, and having approval for B-Doubles to travel from Wagga Road to the Nexus Industrial Estate, the portion of Gerogery Road in the vicinity of the site prioritises through movement over access.

Figure 4: Looking south-east on Gerogery Road from the intersection with Central Reserve Road, towards the intersection with Wagga Road

Figure 5: Looking north-west on Gerogery Road at intersection with Central Reserve Road

2.3.3 Central Reserve Road

Central Reserve Road runs west from its intersection with Gerogery Road for a distance of approximately 5km until it finishes in a cul-de-sac.

In the vicinity of the site, Central Reserve Road is a two-lane, two-way rural sealed road. With a road reserve width of approximately 20m, Central Reserve Road has a 7.0m carriageway, with a marked centre line and no edge lines. Mature native vegetation is located within several metres of the edge of the carriageway, and no street lighting is present. Although no speed zone signage is in place, the road is subject to the default rural speed limit of 100km/h.

Central Reserve Road is the responsibility of Albury City Council. Being a dead-end road, it's role in the road network is primarily to provide direct property access, with properties along the route including rural properties, a quarry, a model plane airstrip and military lands.

Figure 6: Looking south-east along Central Reserve Road (from near the future northern site access) towards the intersection with Gerogery Road

2.4 Existing Traffic Conditions

2.4.1 Data Collection

The following data was provided by Albury City Council:

- Turning movement and signal phasing data at the intersection of Wagga Road and Thurgoona Drive/Kaitlers Road from 2018; and
- Midblock data on Wagga Road (Thurgoona Drive/Kaitlers Road to Windsor Avenue, as well as Windsor Avenue to Gerogery Road) from 2017, as well as on Gerogery Road (Wagga Road to Hub Road) from 2016.

A previous Traffic Impact Assessment was prepared for the site in 2011. This contained an assessment of existing and projected traffic volumes. A copy of the assessment is included in Appendix B.

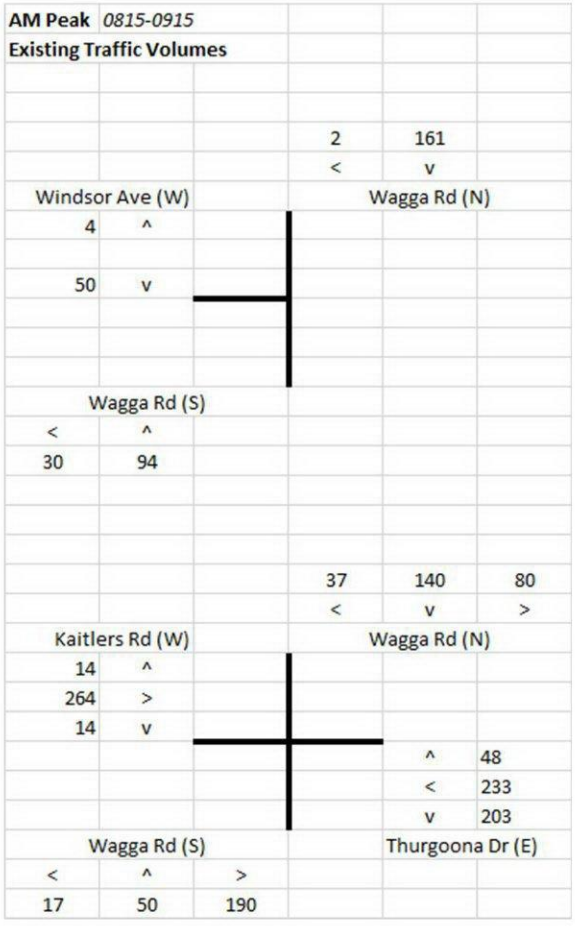
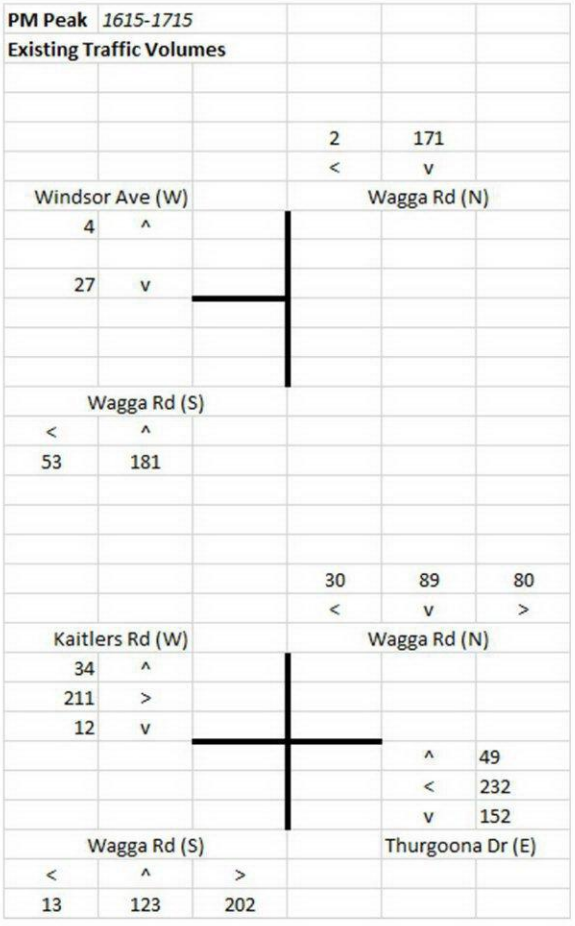
Turning movement surveys were undertaken at the intersection of Wagga Road and Windsor Avenue on Wednesday 12 September 2018. This was within NSW school term dates. Surveys were undertaken during the morning and afternoon peak periods between 8:00AM-9:30AM and 4:00PM-6:00PM. This allowed the peak hour within each period to be determined.

2.4.2 Intersections

A comparison was made between the turning movement counts provided by Albury City Council and also those collected by Spotto Consulting, which showed that traffic on Wagga Road between Windsor Avenue and Thurgoona Drive was similar for the two studies in both northbound and southbound directions.

The turning movements for the busiest one-hour period in both the AM Peak (8:15AM-9:15AM) and PM Peak (4:15PM-5:15PM) periods are summarised in Table 1.

Table 1: Peak Hour Turning Movement Summaries – 2018

AM Peak	PM Peak
	

The performance of both intersections was modelled using the intersection analysis program SIDRA Intersection. Full results for the existing AM and PM peak periods are included in Appendix C, and summarised Table 2 below.

Table 2: Intersection performance summary - existing conditions

Performance Criteria	Wagga Rd & Windsor Ave		Wagga Rd & Thurgoona Dr/Kaitlers Rd	
	AM	PM	AM	PM
Total Flow	359 veh/h	461 veh/h	1358 veh/h	1292 veh/h
Degree of Saturation	0.081	0.101	0.570	0.518
Average Delay	2.3 sec	1.8 sec	15.1 sec	15.9 sec
Level of Service*	A	A	B	B

** Level of Service (LOS) is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays and freedom to manoeuvre. It ranges from A (best) to F (worst), and is calculated using average delay (as per RMS Guidelines).*

The analysis indicates that both intersections currently operate at an acceptable Level of Service in both the AM and PM peak periods, with low levels of saturation and minimal delays.

Although the site has access approved to Central Reserve Road, the volume of traffic that will use this access is much lower than Windsor Avenue. In addition, both Gerogery Road and Wagga Road to the north have much lower traffic volumes. If the performance of the two intersections modelled in SIDRA Intersection is acceptable, the intersections of Central Reserve Road and Wagga Road, as well as Gerogery Road and Wagga Road – which have lower traffic volumes – are in turn also likely to be acceptable and therefore do not require assessment.

The turning movement counts can also be used to estimate peak traffic generation for the existing site, enabling a comparison to be made to the rates specified in guidelines published by NSW Roads and Maritime Services (RMS) for traffic generation at various land uses (*RMS Technical Direction TDT2013/04a Guide to Traffic Generating Developments – Updated Traffic Surveys*). This comparison is summarised in Table 3 below.

Table 3: Traffic Generated

Traffic Generated	AM Peak	PM Peak
Observed Values		
Inbound Vehicles	32	55
Outbound Vehicles	54	31
Total Vehicles per Hour	86	86
Allotments	98	98
Vehicles per hour per Allotment	0.88	0.88
RMS Guidelines Vehicles per hour per Dwelling (Regional Areas)	0.71	0.78

This comparison uses the 98 residential allotments that have been released as part of Stages 1 and 2. Although not all allotments have an occupied house constructed on them, additional traffic at the site includes trades vehicles associated with house building for Stages 1 and 2, as well as construction traffic associated with Stage 3. These factors have a tendency to balance each other out when determining the overall traffic volume for the site.

This shows that the typical AM and PM peak traffic generated at the sight is slightly higher than estimated by the RMS Guidelines (of the order of 10-20%). This is consistent with observations by the author for other large lot residential estates on urban fringe areas, which tend to have higher levels of both car ownership and usage.

2.4.3 Midblock

Existing mid-block traffic data was provided by Albury City Council for both Wagga Road and Gerogery Road. A copy is included in Appendix D. The Wagga Road data was from 2017, and is therefore able to be compared to the 2018 turning count data. A summary of the midblock data for the busiest section of Wagga Road in the vicinity of the site (between Thurgoona Drive/Kaitlers Road and Windsor Avenue), including weekday traffic volumes (in vehicles per day), peak hour traffic volumes (in vehicles per hour) and Level of Service (LOS) in each direction, is provided in Table 4 below.

Table 4: Midblock traffic data – Wagga Road

Data Source	Weekday	Weekday AM Peak		Weekday PM Peak	
	Veh/d	Veh/h	LOS*	Veh/h	LOS*
2017 ACC Midblock Counts	4,053	328		387	
Northbound		128	A	192	A
Southbound		200	A	195	A
2018 Spotto Turn Counts	4,261#	335		432	
Northbound		124	A	234	B
Southbound		211	B	198	A
2018 ACC Turn Counts	3,870#	369		405	
Northbound		112	A	198	A
Southbound		257	B	206	B

** Level of Service calculated based on typical midblock capacities from Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis.*

 # Daily traffic volume from midblock counts is determined by taking the average of the AM and PM peak hour and assuming this represents 9% of the total daily volume (as per 2017 ACC Midblock Counts)

The 2011 Traffic Impact Assessment estimated that traffic volumes on Wagga Road would be 3,270-3,870 in 2015, and 5,040-6,280 in 2020. Given that the volume data presented in Table 4 is between these two time periods, and the volume also lies between the estimated ranges, it is concluded that the volumes predicted in the 2011 Traffic Impact Assessment were reasonable.

In general levels of service for the segments of road analysed are excellent, operating at either the highest or second-highest level (A or B, respectively). This indicates that Wagga Road has adequate midblock capacity at present.

Data was also provided by Albury City Council for Gerogery Road, which showed that the two-way traffic volume in 2016 between Wagga Road and Hub Road was 1,617 vehicles per day on a typical weekday. No data was available for Central Reserve Road, however volumes would be expected to be even lower than on Wagga Road or Gerogery Road. Given that traffic volumes on Gerogery Road and Central Reserve Road are below those on Wagga Road, and that Wagga Road has adequate midblock capacity, it is concluded that Gerogery Road and Central Reserve Road also currently have adequate capacity.

2.5 Public Transport

The nearest public transport to the site is the town bus service provided by Martins Albury. The 908 route runs along Kaitlers Road and Thurgoona Drive, approximately 1.5km south of the site, and connects Springdale Heights to Thurgoona, Lavington and Albury. From central Albury, passengers can transfer on to other town bus services to connect to other parts of Albury or to Wodonga. The 908 runs roughly once per hour Monday to Friday and also Saturday mornings.

Inter-city coach and rail services are available from the Albury Train Station, which is located approximately 8km south of the site on the eastern edge of the Albury CBD.

It is noted that school buses service the site, picking up and dropping off students near the intersection of Wagga Road and Windsor Avenue.

2.6 Pedestrians and Cyclists

Pedestrians can utilise footpaths within the site to travel throughout the subdivision, with all roads having footpaths on one side. Cyclists must travel on-road throughout the subdivision.

It was noted at the time of the traffic surveys that a 2.5m wide shared path is currently under construction. This runs along the western side of Wagga Road, connecting the site to the intersection of Wagga Road and Kaitlers Road/Thurgoona Drive. The broader Albury path network can be accessed further from here.

3 PROPOSED DEVELOPMENT

The proposed development involves changing the number and size of the lots. Currently there are a number of lots approved that are 4,000m^2 or more in size. It is proposed to modify these to reduce the size of individual lots, thereby creating more lots without increasing the overall area of the development.

Forty-seven of the 4,000m^2 lots are proposed to be reconfigured into seventy-four 1,500m^2 lots. Based on this, the number of residential allotments would increase by 27, from a total of 386 to 413.

The internal road layout and access to the surrounding road network will remain generally the same as the approved layout.

It is noted that there are some lots that contain either parks or stormwater basins – these do not generate traffic, and only the change in number of residential lots has been considered for this assessment.

Plans of the proposed development are included in Appendix E.

4 IMPACT OF PROPOSED DEVELOPMENT

4.1 Road Network

4.1.1 Traffic Generation and Distribution

The *RMS Technical Direction TDT2013/04a Guide to Traffic Generating Developments – Updated Traffic Surveys* can be used to estimate the additional traffic generated by the proposed development. The guide notes that the generation rate for residential dwellings in regional areas is:

- Weekday daily vehicle trips = 7.4 per dwelling;
- Weekday average morning peak hour vehicle trips = 0.71 per dwelling; and
- Weekday average evening peak hour vehicle trips = 0.78 per dwelling.

As previously noted in Section 2.4.2, the observed AM and PM peak traffic generation rates for the existing development are higher than these rates, in line with expectations for large lot residential developments located in fringe areas. Accordingly, the rates specified in the RMS Guide have been increased by 15%, and the following rates are used to determine the traffic generated by future development:

- Weekday daily vehicle trips = 8.5 per dwelling;
- Weekday average morning peak hour vehicle trips = 0.82 per dwelling; and
- Weekday average evening peak hour vehicle trips = 0.90 per dwelling.

A comparison of the total traffic generated by the site under the current approval, and also for the proposed development, is presented in Table 5 below.

Table 5: Total Traffic Generation – Current Approval versus Proposed Development

Scenario	Weekday	Weekday AM Peak	Weekday PM Peak
	Veh/d	Veh/h	Veh/h
Approved Development 386 lots	3,281	317	347
Proposed Development 413 lots	3,511	339	372
Difference	+230	+22	+25

This shows that the total increase in traffic generated by the site as a result of the proposed development is an additional 7% (commensurate with the increase in lot numbers).

Other assumptions used to determine traffic generation and distribution for the site are that:

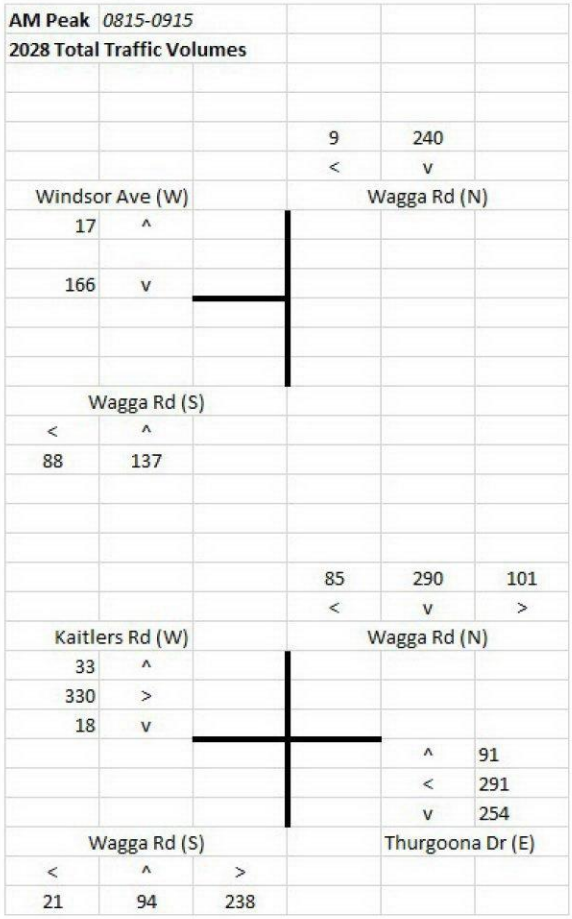
- 90% of traffic will be to/from the south, and 10% will be to/from the north (in line with observations of existing movements);
- 2/3 of traffic will be outbound, and 1/3 inbound in the AM Peak, with these values reversed in the PM Peak (in line with observations of existing movements);
- 75% of traffic will utilise the Windsor Avenue access, while 25% will utilise the Central Reserve Road access (in line with the distribution of lots between the two and the stronger attraction to/from the south); and
- The site will develop at a rate of 30 lots per year, until fully developed in 2028.

It is further assumed that traffic volumes on the surrounding road network will grow at a rate of 2.5% per annum. This is higher than the typical assumed growth rate of 2.0% per annum to account for the fact that the area is located somewhat near to Albury's future growth corridor at Thurgoona.

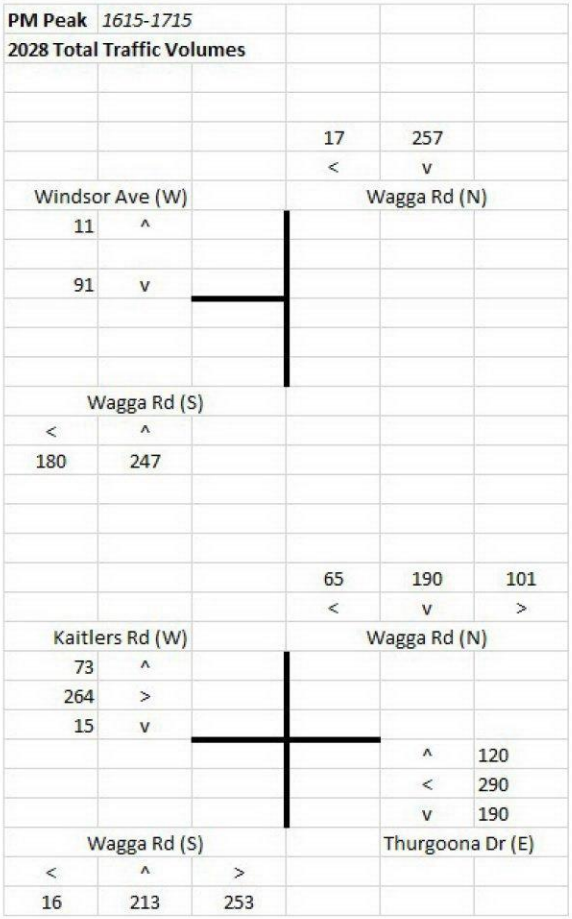
The existing and anticipated traffic volumes for the site, along with the net anticipated change in traffic volumes for the AM and PM peak periods (including growth in background traffic volumes) are summarised in Table 6, below.

Table 6: Peak Hour Turning Movement Summaries – 2028

AM Peak



PM Peak



4.1.2 Traffic Impact at Intersections

The performance of the two key intersections were modelled using the intersection analysis program SIDRA Intersection. Initially analysis was undertaken using the existing signal phase and cycle times (Scenario A). While the Level of Service remains at an acceptable level, there is some increase in queue lengths and degree of saturation on approaches at the signalised intersection. As this intersection is controlled by software that adapts both cycle and phase times to account for changes in traffic volume, this is not a realistic assessment of how the intersection will perform. Further modelling was therefore undertaken on the signalised intersection and the SIDRA Intersection program configured to optimise the cycle times based on future traffic flows (Scenario B).

Based on this modelling, full results for the AM and PM Peak periods for Scenario B are included in Appendix F, and both scenarios are summarised in Table 7 below.

Table 7: Intersection performance summary – 2028 with full development

Performance Criteria	Wagga Rd & Windsor Ave		Wagga Rd & Thurgoona Dr/Kaitlers Rd	
	AM	PM	AM	PM
Scenario A: Using Existing Signal Timing				
Total Flow	692 veh/h	845 veh/h	1943 veh/h	1884 veh/h
Degree of Saturation	0.350	0.264	0.934	0.757
Average Delay	5.0 sec	4.2 sec	19.8 sec	19.4 sec
Level of Service	A	A	B	B
Scenario B: Optimised Signal Timing				
Total Flow	No Change	No Change	1943 veh/h	1884 veh/h
Degree of Saturation			0.794	0.871
Average Delay			18.4 sec	20.1 sec
Level of Service			B	B

The analysis indicates that both intersections will continue to operate at an acceptable level of service in the future, even allowing for above-average growth in background traffic volumes and additional traffic generated by the proposed development.

As both the key intersections continue to operate at acceptable levels of service, and the other intersections in the vicinity of the site (Central Reserve Road and Gerogery Road, as well as Gerogery Road and Wagga Road) will have lower levels of traffic, it is reasonable to assume that these intersections will also operate at an acceptable level of service.

It is concluded that traffic from the proposed development, as well as growth in background traffic volumes, can be accommodated at key intersections in the vicinity of the site. As vehicles travel further throughout the network, traffic generated by the proposed development becomes more dispersed, and hence has a lower net impact on other intersections. Hence if the impact at nearby intersections is within acceptable limits, then beyond these roads the impact will be even lower.

Although the level of service at the Wagga Road and Windsor Avenue intersection is acceptable, it is noted in the that the left turn lane from Wagga Road into Windsor Avenue was constructed as an Auxiliary Left Turn (Short) lane (an AUL(S)), with the southbound side of the carriageway widened to form a Basic Right turn lane (a BAR), with a recommendation in the 2011 traffic study that the intersection be reassessed in future. Based on the projected movements at the intersection in 2028, using the techniques outlined in the *Austroads Guide to Road Design Part 4: Intersections and Crossings – General*, and assuming Wagga Road remains a 100km/h road, the following has been concluded in relation to intersection layout:

- The increase in northbound left turn and northbound through traffic is sufficient to warrant upgrading of the intersection from an AUL(S) to a full AUL. This will require the left turn lane to be extended southwards for a distance of approximately 90m; and
- The relatively low number of southbound right turn traffic means that an upgrade is not warranted, and the existing BAR configuration will suffice.

4.1.3 Traffic Impact Midblock

The additional traffic generated by the proposed development and by growth in background traffic volumes was added to the existing traffic volumes on Wagga Road between Thurgoona Drive/Kaitlers Road and Windsor Avenue. The total traffic volume is summarised in Table 8 below.

Table 8: Midblock traffic data – Wagga Road

Location	Weekday	Weekday AM Peak		Weekday PM Peak	
	Veh/d	Veh/h	LOS	Veh/h	LOS
2028 Predicted Volume	7,811	631		775	
Northbound		225	B	427	C
Southbound		406	C	348	B

The analysis shows that Wagga Road continues to operate at a satisfactory level of service (C) in 2028, even with the additional traffic generated by the proposed development and above-average growth in background traffic volumes. The weekday traffic volume is in the range of that predicted by the 2011 Traffic Impact Assessment (6,800-8,600 vehicles per day), and still well below the 12,000 vehicles per day that Wagga Road carried when it functioned as the Hume Highway.

Similar to the arguments presented in Section 2.4.3, given that traffic volumes on Gerogery Road and Central Reserve Road are below those on Wagga Road, and that Wagga Road has adequate midblock capacity, it is concluded that Gerogery Road and Central Reserve Road would also have adequate capacity to 2028.

Similar to impacts at intersections, as vehicles travel further throughout the network, traffic generated by the proposed development becomes more dispersed, and hence has a lower net impact on other roads. Hence if the impact on the roads surrounding the site is within acceptable limits, then beyond these roads the impact will be even lower.

Roads within the estate have also been designed to follow a clear road hierarchy, with larger, higher order roads distributing traffic between the access roads and housing. There is no significant change to this road hierarchy as a result of the proposed development, and therefore traffic flows within the development would be expected to be largely unchanged.

It is concluded that the additional traffic generated by the proposed development is able to be accommodated by roads within the site, and that there will be no significant impact on roads surrounding the site or further afield.

4.2 Parking Requirements and Impact

Albury Development Control Plan (DCP) Part 17 – Off Street Car Parking specifies the minimum parking spaces required for a development, depending on the land use type. Given that the development will be a residential housing estate, and all houses will be provided with off-street parking to meet Council's requirements, it is not anticipated that there will be any significant impact to parking in the estate or surrounding areas.

4.3 Pedestrian and Cyclist Impact

It is not proposed to make any significant change to the layout of the subdivision roads or their associated footpaths. Therefore it is not anticipated that there would be any significant impact on the number of pedestrians and cyclists, or the routes taken by them.

5 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

- Traffic surveys and modelling of the key intersections of Wagga Road and Windsor Avenue, as well as Wagga Road and Thurgoona Drive/Kaitlers Road show that both intersections currently operate at a good Level of Service (LOS C or better), with midblock level of service on Wagga Road south of the site also being good (LOS B or better);
- The proposed development involves changing the number and size of the lots, with the number of residential allotments increasing by 27 from 386 to 413;
- The internal road layout and access to the surrounding road network will remain generally the same as the approved layout;
- The proposed development will result in an increase in traffic volume of 230 vehicles per day (22 vehicles per hour in the AM peak period and 25 vehicles per hour in the PM peak period) over the current approved layout;
- There is sufficient capacity in the surrounding road network and key intersections to accommodate the additional traffic generated by the proposed development, in addition to catering for the next ten years growth in existing traffic volumes on the surrounding road network. Modelling shows that intersections and midblock levels of service will continue to be an acceptable level of C or better;
- Parking requirements can be met by providing off-street parking in accordance with Albury Development Control Plan Part 17 – Off-Street Car Parking; and
- There will be no significant adverse impact on the movement of pedestrians and cyclists.

It is recommended that:

- The left turn lane from Wagga Road into Windsor Avenue be extended to comply with the requirements for a full Auxiliary Left Turn (AUL) lane, requiring an extension approximately 90m to the south (assuming Wagga Road remains zoned at 100km/h in future).

APPENDIX A – APPROVED SUBDIVISION PLAN

SCANNED

ETTAMOGAH RISE
DA PLANS
STAGES 2–9

OVERALL STAGE 2–9 STAGING PLAN

esler & ASSOCIATES

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AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 2–9 DA PLANS (REV–J)	08/10/12
2. STAGE 2 ALLOTMENT ADJUSTMENT	02/11/12
3. STAGE 2–9 DA PLANS (REV–K)	02/11/12
4. STAGE 2–9 DA PLANS (REV–L)	16/11/12
5. EX FEATURE & SURVEY PLAN	20/11/12
6. STAGE 2–9 DA PLANS (REV–M)	22/11/12
7. STAGE 2–9 DA PLANS (REV–N)	17/10/13
8.	
9.	
EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2.	
3.	
AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2.	
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2012

PROJECT No: 00016917 | REV: N

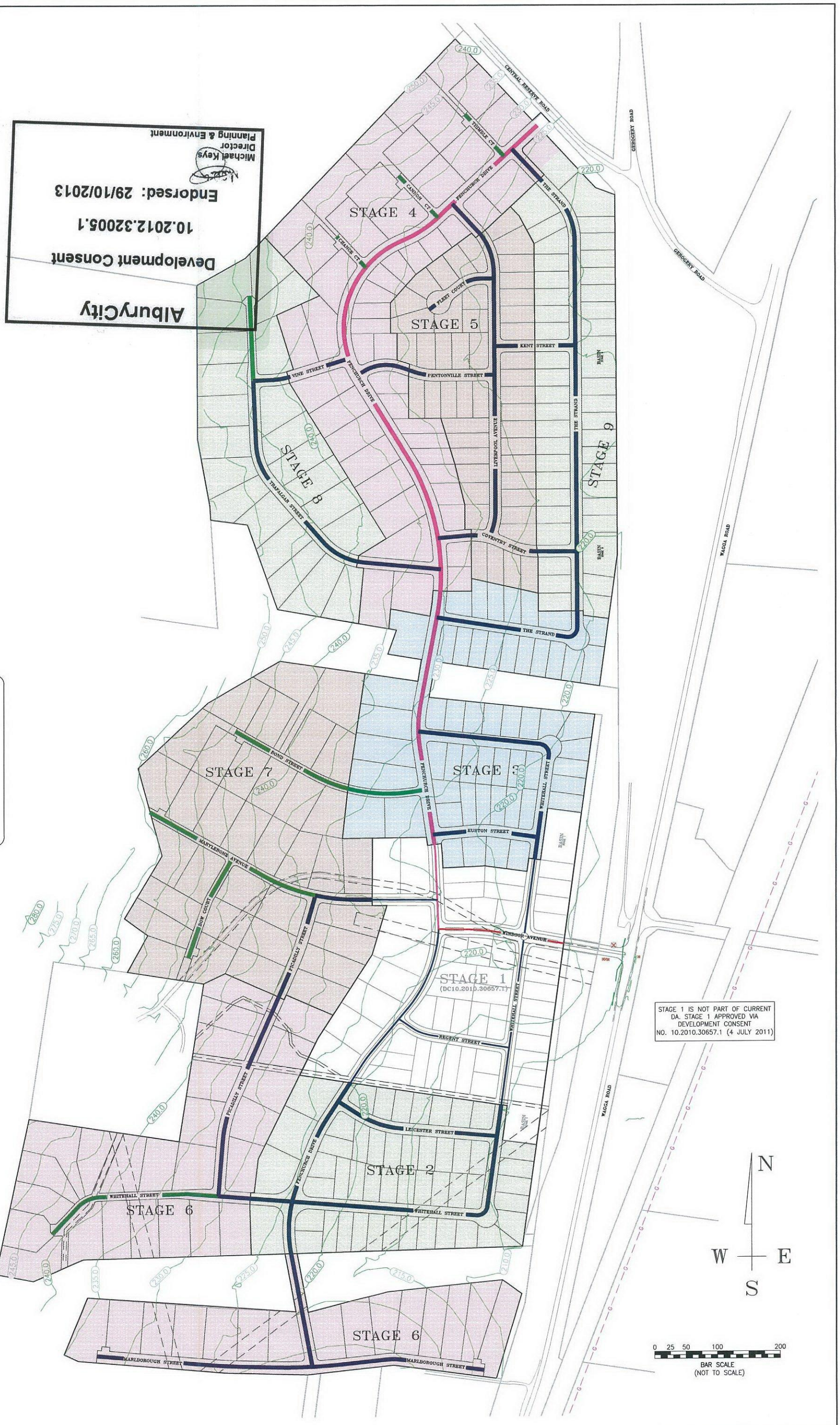
SHEET 1 OF 17 | A1

AlburyCity
Development Consent
10.2012.32005.1
Endorsed: 29/10/2013
Michael Keys
Director
Planning & Environment

ROAD RESERVE DETAIL

- 13m ROAD RESERVE — 3.5m NATURESTRIP, 6m INVERT–INVERT
- 19m ROAD RESERVE — 5.5m NATURESTRIP, 8m INVERT–INVERT
- 22m ROAD RESERVE — 5.5m NATURESTRIP, 11m INVERT–INVERT
- 26m ROAD RESERVE — 4.5m NATURESTRIP, 2*6.6m INVERT–INVERT, 3.8m MEDIUM STRIP

STAGE	min 4,000sq.m ALLOTMENTS	min 1,500sq.m ALLOTMENTS	TOTAL ALLOTMENTS
2.	4	45	49
3.	6	47	53
4.	28	21	49
5.	0	47	47
6.	40	0	40
7.	35	0	35
8.	22	0	22
9.	3	39	42
	138	199	337



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DATE SHEET PRINTED:– (Thursday, October 17, 2013)

DOC19/144325

APPENDIX B – 2011 TRAFFIC IMPACT ASSESSMENT

October 2010
Revised March 2011 and May 2011

Ettamogah Rise – traffic forecast

Introduction

The Diocese of Wagga Wagga is planning a rural residential estate on Wagga Road near the junction of Gerogery Road. The site has the potential for 370 dwellings. Albury City Council has requested a forecast of traffic on Wagga Road over the next 15 years. It is understood there is a need to understand any affects passing traffic may have on residential amenity in the proposed development. This forecast gives consideration to the planning for the immediate area and uses the best available data to calculate future traffic growth for the period 2010 – 2025.

Planning for the Albury Industrial Hub

Albury City Council has prepared a Master Plan to show current planning for industrial growth west of the Hume Freeway in the general area between the paper mill and the Gerogery Road. The large estate of approximately 1,000 ha is to be developed over 4 stages. Stages 1 – 3 are proposed to be developed between 2010 and 2030.

Stage 1 of the Plan is near the Gerogery Road and might involve between 15 and 30 ha of smaller parcels between the years 2010 and 2025. During this stage, it is not proposed to connect Daveys Road to the Hume Freeway. Therefore the traffic generated by the new development in stage 1 will need to access Albury via Wagga Road between Gerogery Road and Thurgoona Drive. At this location, access to the Hume Freeway is possible. After 2025, Council proposes to seek the construction of an interchange onto the Hume Freeway at Daveys Road. This will have the effect of re-assigning the bulk of developed traffic on Wagga Road onto the Hume freeway

For this reason the consideration of traffic growth on Wagga Road past the residential development is important up until 2025 after which it will become minimal.

Estimating Traffic Generation from the Albury Industrial Hub.

With very sketchy detail available about the industrial development, it has been necessary to make many assumptions. Details of these assumptions and calculations area set out below. Because of the assumptions, this forecast has been expressed as an upper and lower range of traffic volumes. Also these estimates have been further refined to predict the numbers of heavy vehicles using Wagga Road. As noise pollution may be the prime consideration, heavy vehicle estimation is vital to assessing the situation.

The size of the Stage 1 development has been **assumed to be between 15ha and 30ha**. This has been based on a rough estimation from the Master Plan and the author's knowledge of current possibilities for regional city industrial development.

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The RTA Guide to Traffic Generating Developments is very sketchy in assisting the prediction of industrial traffic generation. Estimates of between 4 and 5 daily trips per 100 m2 of industrial floor space are suggested for strategic planning where there is no detail of the actual type of development. Because the industrial area is a distance from the Albury CBD the hub should contain ancillary services that may reduce trips between the hub and the CBD. Therefore the lower **trip generation figure of 4 trips per 100 m2 of floor area** was used.

The Master Plan advises that each site will **not be allowed to develop more than 65% of the site area**. Also the floor space has been assumed to be only **half of the allowable site developable area**. This will allow for hard stands and vehicle movement areas.

On this basis the calculations for total trip generation are:

Lower prediction 65% of 15 ha @ 50% developed floor space = 5 ha of floor area
Daily traffic generation at 4 trips per 100 m2 $\frac{50.000}{100} \times 4$ = 2,000 vehicle trips per day

Upper prediction 65% of 30 ha @ 50% developed floor space = 10 ha of floor area
Daily traffic generation at 4 trips per 100 m2 $\frac{100.000}{100} \times 4$ = 4,000 vehicle trips per day

If 10% of the traffic is considered to be heavy vehicles, then the heavy traffic on Wagga Road is estimated to be between 200 and 400 trucks.

The predictions made have been compared to a situation well known to the author. The Bomen Industrial Estate on the northern side of Wagga Wagga has developed over the last 25 years. The site area at Bomen has been estimated to be in the order of **25 ha**. Only two roads give access from Wagga Wagga to the area. These two have a total traffic of **4,500 vehicles per day**. As the Bomen site has a livestock marketing centre and a labour intensive abattoir, the traffic generation is considered to be higher per hectare than might be developed in the Albury Industrial Hub. The comparison of the two areas gives some validation to the estimate set out above.

In summary, the estimated traffic generation from stage 1 of the Albury Industrial Hub is considered to be in the **range of 2,000 to 4,000 vehicles trips per day**. Because there will be no connection to the to the Hume Freeway, the traffic will mostly use Wagga Road to access Albury. Approximately 10% of this traffic can be regarded as trucks.

Estimating Residential Traffic Generation from Ettamogah Rise

The RTA guide to Traffic Generating Developments advises that 9 vehicle trips per day are generated per dwelling in residential developments. It has been the author's experience that this is more likely to be 8 trips per day for rural residential dwelling. This is particularly so where the dwellings are a distance from the CBD as is the case for Ettamogah Rise. **Allow 8 trips per dwelling.**

The potential of the estate is 370 lots. It is estimated that the annual average take-up of developed units will average say 30 lots per year. This means the development will need to done in stages over 15 years.

It is therefore estimated the growth of **traffic generation will be 240 trips per day per y**ear for the next 15 years.

Total Traffic Generation on Wagga Road.

The above calculations have been combined with the estimated current traffic (1,500 vpd) to complete the forecast. The tables below show the total traffic and the heavy vehicle traffic

ESTIMATED TOTAL VEHICLES ON WAGGA ROAD

YEAR	TOTAL EXISTING	TOTAL RESIDENTIAL GROWTH	INDUSTRiAL GROWTH RANGE	TOTAL TRAFFIC RANGE
2010	1,500	0	0 - 0	1,500
2015	1,500	1,200	570 - 1140	3270 - 3870
2020	1,500	2,400	1140- - 2280	5040 - 6180
2025	1,500	3,600	1700 - 3500	6800 - 8600

ESTIMATED HEAVY VEHICLES ON WAGGA ROAD

YEAR	TOTAL EXISTING	TOTAL RESIDENTIAL GROWTH	INDUSTRiAL GROWTH RANGE	TOTAL TRAFFIC RANGE
2010	45	0	0 - 0	45
2015	45	36	46 - 92	127 - 173
2020	45	72	92 - 184	209 - 301
2025	45	108	136 - 280	289 - 433

Note: Residential traffic is estimated as having 3% heavies
Industrial traffic is estimated as having 10% heavies

Before the Hume Freeway, Wagga Road was the Hume Highway and carried up to 12,000 vpd. Once the Hume Freeway was opened, the traffic reduced to below 1,500 vpd. If the Ettamogah Rise residential development and the Albury Industrial Hub proceed as planned the traffic on Wagga Road will grow steadily from 1,500 vpd to between 6,800 and 8,600 vpd from 2010 to 2025. After this the traffic will be able to access the Hume Freeway and traffic on the Wagga Road will fall to less than 2,000 vpd.

Garry Gaffney
FIEAust., CPEng MAITPM
ESLER & ASSOCIATES
Wagga Wagga Office

Proposed Layout
Intersection Wagga Road and One Tree Lane

Introduction

Albury City Council has requested advice from the developer on the proposed layout of the intersection of Wagga Road and One Tree Lane to suit the traffic growth for the estate and for the through road. This appendix sets out the calculations and considerations for traffic forecasts at the intersection and recommendations for the layout proposals for the first eight years of the development of the Ettamogah Rise residential estate.

Assumptions

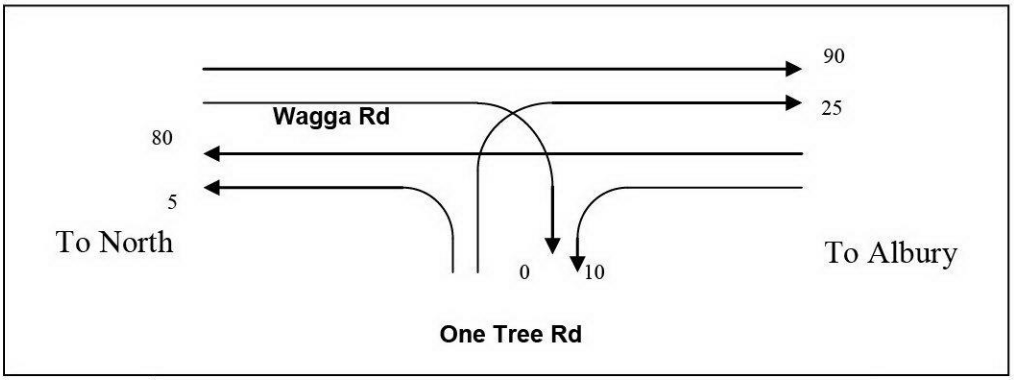
As previously stated, the take-up of new residential lots has been assumed to average 30 lots/year. The table below sets out the calculations of traffic generated in total and in the AM and PM peaks based on 12% of the daily traffic being in the peak hours.

TRIP GENERATION ONE TREE RD

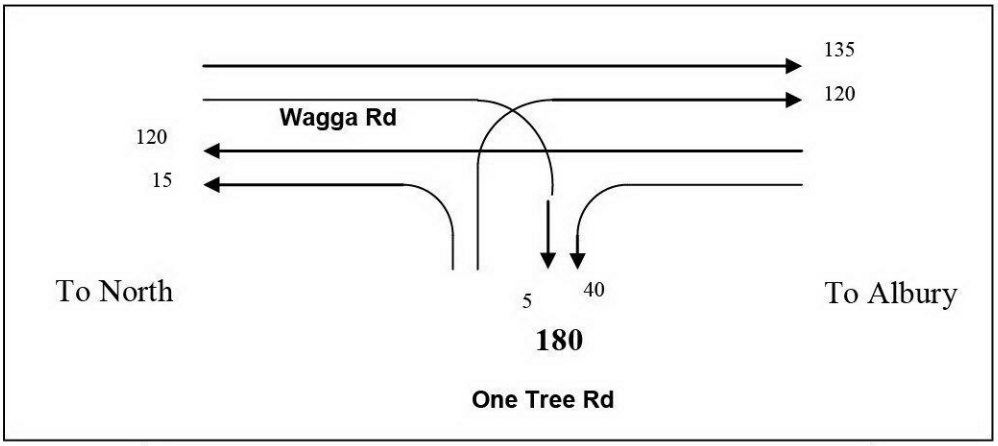
YEAR	TOTAL LOTS DEVELOPED	TRIPS PER DAY	TOTAL DAILY TRAFFIC GENERATED	PEAK HOUR TRAFFIC GENERATED
2012	30	8	240	20
2013	60	8	480	40
2014	90	8	720	60
2015	120	8	960	80
2016	150	8	1200	100
2017	180	8	1440	120
2018	210	8	1680	140
2019	240	8	1920	160
2020	270	8	2160	180

Also, the traffic generated along Wagga Road has been assumed to be the average of the high and low forecasts calculated earlier in this document. Therefore the estimated peak hour counts shown in the sketches below are based on the distribution of traffic to the network based on the best knowledge of the situation for the base year (2012) and after 8 years (2020).

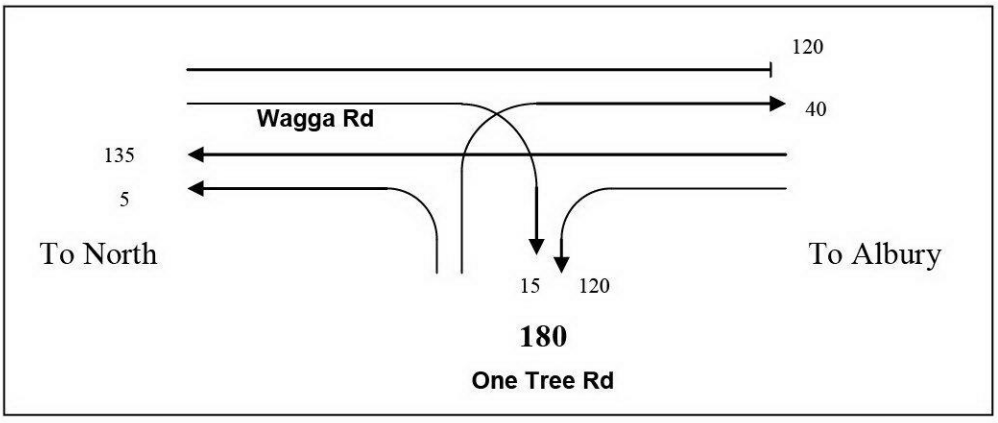
ESTIMATED TURN COUNTS



Estimated AM hourly turn counts with traffic generated by the development assigned to the new intersection In the first year (2012



Estimated AM hourly turn counts with traffic generated by the development assigned to the new intersection after 8 years (2020)



Estimated PM hourly turn counts with traffic generated by the development assigned to the new intersection after 8 years (2020)

With more jobs and services to the south of the estate (Albury city) and less to the north, the distribution of traffic growth from the estate has higher assignment toward Albury in the AM peak hour. The reverse is likely to occur in the PM peak as vehicles return to the residential area from the city.

The turn counts above have been analysed using the RTA Road Design Guide to determine the appropriate intersection layout for One Tree Road and Wagga Rd.

The appropriate treatment is considered to be an AUL layout. For the foreseeable future the intersection requires deceleration and acceleration tapers of 80 metres in length on the western side of Wagga Rd. With low traffic volumes on Wagga Rd and very good sight distance, there is no justification in the provision of widening (AUR) on the eastern side of Wagga Rd during the forecast period.

Sight distance at the intersection is very good in both directions

Garry Gaffney
March 2011

The Fully Developed Estate

Introduction

Following my modified report (addition of appendix 1) on traffic generation and access issues for the Ettamaogah Rise development, I have been asked to comment on the probability of the intersection of One Tree Rd ever needing an upgrade when the estate is fully developed.

Traffic Forecasting Assumptions

In my considerations for Appendix 1, I employed assumptions. These related to the take-up of residential allotments in the estate, the single access via One Tree Rd and the growth of traffic on Wagga Road. The latter issue is dependant on a proposed Industrial Hub development in accordance with a master plan prepared by Albury City Council. The master plan suggests that at about the year 2025, a new access will be developed onto the Hume freeway at Daveys Road. This new access has the potential to reassign traffic growth on Wagga Road to the Hume Freeway. I have been verbally advised by planners at the RTA, that this could actually happen sooner.

Consideration of the fully developed access conditions.

In appendix 1, I considered the period 2012 - 2020, A period of 9 years out of say 13 years to fully develop the site at 30 lots per year. I considered that the period to 2020 was adequate to assist ACC to assess the initial DA for the estate. I also considered that ACC would have other opportunities, with subsequent DAs for later stages, to assess if the assumptions remain accurate over the later stages of the development of the estate. It appears that ACC would now like an opinion on the need to eventually upgrade the intersection of One Tree Rd when the estate is fully developed.

In my earlier considerations, I assigned a large percentage of generated traffic in the estate as heading to, or coming from, Albury. The predominant AM out bound trips are therefore right turners from One Tree Rd onto Wagga Rd. These turns would be controlled by a GIVE WAY road rule. In the PM, the predominant movement at the One Tree Rd intersection will be left turns from Wagga Rd into the estate. The right turners from Wagga Rd into the estate (southbound) are considered to be light. These circumstances led me to conclude that the appropriate initial upgrade is an AUL treatment. This involves widening on the estate side of the intersection only. It will accommodate left turners.

In the final 4 years of the development there will be a new road constructed off the old Olympic Way and Central Reserve Road at the northern end of the estate. There is also the possibility of more residents in the estate having trips towards the north and perhaps the growing industrial hub. The new second access will have the effect of providing a more direct access to the north and may in fact reduce the northbound traffic from the estate using One Tree Rd. Then there is the new access to the freeway that will substantially reduce through traffic along Wagga Road.

Conclusion

Based on the assumptions made, the calculations of traffic growth and the RTA standards, it is my opinion the intersection will never need widening to an AUR treatment. If developed as an AUL layout in the initial stage of the estate, it is expected to perform satisfactorily after the Ettamogah Rise development is completed. As my conclusions are based on assumptions, I would expect the ACC to reassess the situation before the final DA for the estate is determined.

Garry Gaffney
19 May 2011

4.5.4 Output

The output of this process of considering the layout options for the site will be a number of intersection layouts, and forms of control, that are clearly ***inappropriate***. The remaining options and forms of control are then carried forward into the evaluation process. This process is detailed in **Section 4.6.**

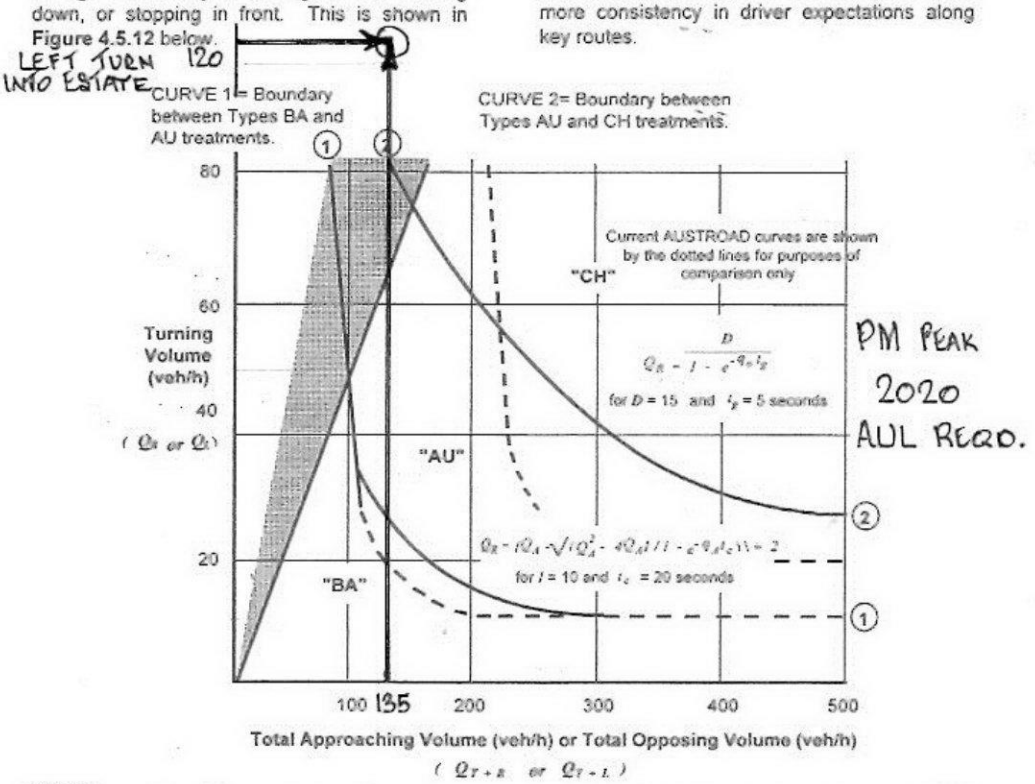
In the absence of any other information, **Table 4.5.3** can assist in identifying layout options, and forms of control, which are not suited to a site.

At RURAL sites McKerral, Leong & Dominis (ref 11) considered the probability of interference to a through vehicle by a turning vehicle slowing down, or stopping in front. This is shown in **Figure 4.5.12** below.

Curve 1 shows the relationship where 10 vehicles are required to slow each hour (l=10) and the conflict time (t_c) is 20 seconds. In the formula, Q_A is the total approach volume (veh/hr), Q_R (or Q_L) the turning volume (ie. Q_R) (veh/hr), and q_A the total approach volume given as veh/sec.

Curve 2 shows where 15 veh/h must stand waiting for a gap (t_g) of 5 secs. Here q_0 is the volume of opposing traffic in veh/sec., and tg is the gap necessary to turn (assumed as 5 secs.

It must be stressed that **Figure 4.5.12** is only a guide and the final choice should take into account strategic aspects such as planning for more consistency in driver expectations along key routes.



PM PEAK 2020 AUL REQD.

NOTES:

1. *Where peak hour volumes are not available, assume the design peak hour volume equals 15% of the AADT. for 500 hours each year; use 5% of AADT for the rest of the year. See Section 1.4. for further details.*
2. *Use graph "AU" to select need for an auxiliary lane. Use "CH" to determine if a sheltered right turn is required. On high speed roads with substantial volumes of heavy vehicles, the use of Type "AU " and "CH" is preferred for safety reasons.*
3. *Use of Types "AU" and "CH" is preferred on high speed and/or heavy vehicle routes to enhance safety.*

In this region more than 50% of the approaching traffic turns. Hence consideration needs to be given to possible realignment of the intersection to suit the major traffic movement.

Figure 4.5.12 - Warrants for Rural Turn Lanes

Traffic Count
Intersection of Wagga Road and One Tree Lane, Ettamogah
Wagga Road Traffic Count

4/03/2011 FRIDAY

		Heading North					Heading South				
		Total Vehicles	Cars	Total Trucks	BREAK UP OF TRUCKS		Total Vehicles	Cars	Total Trucks	BREAK UP OF TRUCKS	
					Including B Doubles	Including Bus				Including B Doubles	Including Bus
AM	AM										
8.00	8.15	22	20	2	1	1	19	14	5	1	1
8.15	8.30	20	17	3	1	0	17	13	4	0	1
8.30	8.45	16	14	2	0	0	21	19	2	1	0
8.45	9.00	22	21	1	1	0	32	27	5	1	0
9.00	9.15	22	21	1	0	0	12	12	0	0	0
9.15	9.30	24	21	3	0	0	19	17	2	2	0
9.30	9.45	24	20	4	1	0	13	8	5	0	0
9.45	10.00	18	17	1	0	0	16	11	5	1	1
Total 2 hr count:		168	151	17	4	1	149	121	28	6	3
Per Hour Average:		84	75.5	8.5	2	0.5	74.5	60.5	14	3	1.5
Extrapolated 12 Hour		1008	906	102	24	6	894	726	168	36	18

APPENDIX C – INTERSECTION ANALYSIS – 2018 (EXISTING)

LANE SUMMARY

Site: [Wagga Rd & Windsor Ave_AM Peak_2018]

Wagga Road and Windsor Avenue, Ettamogah
AM Peak Period
2018 Traffic Volumes
Site Category: (None)
Stop (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	32	5.0	1793	0.018	100	8.0	LOS A	0.0	0.0	Short	50	0.0	NA
Lane 2	99	5.0	1889	0.052	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	131	5.0		0.052		1.9	NA	0.0	0.0				
North: Wagga Rd (N)													
Lane 1	37	5.0	1889	0.020	27[6]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 2	134	5.0	1872	0.072	100	0.1	LOS A	0.0	0.1	Full	500	0.0	0.0
Approach	172	5.0		0.072		0.1	NA	0.0	0.1				
West: Windsor Ave (W)													
Lane 1	4	5.0	1053	0.004	100	8.1	LOS A	0.0	0.1	Full	500	0.0	0.0
Lane 2	53	5.0	651	0.081	100	10.1	LOS A	0.3	2.3	Full	500	0.0	0.0
Approach	57	5.0		0.081		9.9	LOS A	0.3	2.3				
Intersection	359	5.0		0.081		2.3	NA	0.3	2.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: [Wagga Rd & Windsor Ave_PM Peak_2018]

Wagga Road and Windsor Avenue, Ettamogah
PM Peak Period
2018 Traffic Volumes
Site Category: (None)
Stop (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	56	5.0	1793	0.031	100	8.0	LOS A	0.0	0.0	Short	50	0.0	NA
Lane 2	191	5.0	1889	0.101	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	246	5.0		0.101		1.8	NA	0.0	0.0				
North: Wagga Rd (N)													
Lane 1	39	5.0	1889	0.021	27[6]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 2	143	5.0	1867	0.076	100	0.2	LOS A	0.0	0.1	Full	500	0.0	0.0
Approach	182	5.0		0.076		0.1	NA	0.0	0.1				
West: Windsor Ave (W)													
Lane 1	4	5.0	947	0.004	100	8.5	LOS A	0.0	0.1	Full	500	0.0	0.0
Lane 2	28	5.0	543	0.052	100	11.4	LOS A	0.2	1.4	Full	500	0.0	0.0
Approach	33	5.0		0.052		11.0	LOS A	0.2	1.4				
Intersection	461	5.0		0.101		1.8	NA	0.2	1.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: 3728 [Wagga Rd & Thurgoona Dr/Kaitlers Rd_AM Peak_2018]

Wagga Road and Thurgoona Drive/Kaitlers Road, Ettamogah
AM Peak Period
2018 Traffic Volumes
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 54 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	36	5.0	264	0.138	85[6]	16.9	LOS B	0.7	4.8	Short	140	0.0	NA
Lane 2	34	5.0	210	0.162	100	25.0	LOS B	0.9	6.3	Full	500	0.0	0.0
Lane 3	200	5.0	351	0.570	100	22.5	LOS B	4.4	31.9	Short	110	0.0	NA
Approach	271	5.0		0.570		22.0	LOS B	4.4	31.9				
East: Thurgoona Dr (E)													
Lane 1	214	5.0	1195	0.179	100	9.3	LOS A	2.1	15.6	Short	60	0.0	NA
Lane 2	296	5.0	708	0.418	100	12.9	LOS A	5.6	40.7	Full	500	0.0	0.0
Approach	509	5.0		0.418		11.4	LOS A	5.6	40.7				
North: Wagga Rd (N)													
Lane 1	132	5.0	309	0.429	91[6]	15.2	LOS B	2.1	15.1	Short	140	0.0	NA
Lane 2	99	5.0	210	0.473	100	26.3	LOS B	2.7	19.4	Full	500	0.0	0.0
Lane 3	39	5.0	407	0.096	100	20.2	LOS B	0.8	5.5	Short	120	0.0	NA
Approach	271	5.0		0.473		20.0	LOS B	2.7	19.4				
West: Kaitlers Rd (W)													
Lane 1	293	5.0	841	0.348	100	10.4	LOS A	5.0	36.6	Full	500	0.0	0.0
Lane 2	15	5.0	377	0.039	100	18.4	LOS B	0.3	1.9	Short	50	0.0	NA
Approach	307	5.0		0.348		10.8	LOS A	5.0	36.6				
Intersection	1358	5.0		0.570		15.1	LOS B	5.6	40.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: 3728 [Wagga Rd & Thurgoona Dr/Kaitlers Rd_PM Peak_2018]

Wagga Road and Thurgoona Drive/Kaitlers Road, Ettamogah
PM Peak Period
2018 Traffic Volumes
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 56 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	67	5.0	241	0.276	85[6]	17.7	LOS B	1.3	9.8	Short	140	0.0	NA
Lane 2	77	5.0	236	0.324	100	25.7	LOS B	2.0	14.9	Full	500	0.0	0.0
Lane 3	213	5.0	411	0.518	100	21.6	LOS B	4.6	33.7	Short	110	0.0	NA
Approach	356	5.0		0.518		21.7	LOS B	4.6	33.7				
East: Thurgoona Dr (E)													
Lane 1	160	5.0	1185	0.135	100	9.4	LOS A	1.6	11.9	Short	60	0.0	NA
Lane 2	296	5.0	689	0.430	100	14.0	LOS A	5.9	43.3	Full	500	0.0	0.0
Approach	456	5.0		0.430		12.4	LOS A	5.9	43.3				
North: Wagga Rd (N)													
Lane 1	109	5.0	415	0.264	91[6]	13.9	LOS A	1.5	11.3	Short	140	0.0	NA
Lane 2	69	5.0	236	0.291	100	25.6	LOS B	1.8	13.3	Full	500	0.0	0.0
Lane 3	32	5.0	404	0.078	100	19.7	LOS B	0.6	4.4	Short	120	0.0	NA
Approach	209	5.0		0.291		18.6	LOS B	1.8	13.3				
West: Kaitlers Rd (W)													
Lane 1	258	5.0	814	0.317	100	11.7	LOS A	4.6	33.7	Full	500	0.0	0.0
Lane 2	13	5.0	373	0.034	100	20.0	LOS B	0.2	1.8	Short	50	0.0	NA
Approach	271	5.0		0.317		12.1	LOS A	4.6	33.7				
Intersection	1292	5.0		0.518		15.9	LOS B	5.9	43.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

APPENDIX D – WAGGA ROAD MIDBLOCK TRAFFIC DATA

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-511 -- English (ENA)

Datasets:

Site:	**[128717] Wagga Road - Thurgoona Drive to Windsor Avenue**
Attribute:	Lavington
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	11:12 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017,
Zone:	
File:	Wagga rd - Thurg dr to Windsor ave (606) aug17 .ec0 (Plus)
Identifier:	NR50QDFM MC5900-X13 (c)MetroCount 09Nov16
Algorithm:	Factory default axle (v5.02)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017 (20.9695)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 38672 / 73567 (52.57%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-511
Site: 128717.0.1NS
Description: **Wagga Road - Thurgoona Drive to Windsor Avenue**
Filter time: **11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017**
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(N) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	6.0	15.0	29.3	26.3	19.3	13.0	11.7	19.2	17.2
0100-0200	4.0	10.7	29.0	13.7	10.0	3.7	6.7	13.5	11.1
0200-0300	2.0	9.0	9.3	16.3	7.3	10.7	5.0	8.8	8.5
0300-0400	4.0	9.7	7.0	20.0	10.7	2.0	3.7	10.3	8.1
0400-0500	12.3	10.3	20.0	25.0	15.7	4.7	3.3	16.7	13.0
0500-0600	32.7	38.7	58.3	58.0	38.3	12.3	7.3	45.2	35.1
0600-0700	81.7	88.7	135.7	133.7	68.0	17.3	16.3	101.5	77.3
0700-0800	**126.7**	124.3	**187.7**	**195.0**	**109.3**	36.0	18.3	**148.6**	**113.9**
0800-0900	101.3	113.7	171.7	156.3	94.3	51.7	31.3	127.5	102.9
0900-1000	88.0	104.3	162.3	128.3	85.7	81.7	59.3	113.7	101.4
1000-1100	93.0	**143.7**	161.3	83.3	99.0	113.3	77.3	116.1	110.1
1100-1200	91.0	141.3	153.3	93.3	106.3	**114.7**	**78.7**	117.1	111.2
1200-1300	90.3	156.0	159.0	99.3	120.7	**118.0**	91.7	125.1	119.3
1300-1400	105.3	147.3	174.7	107.3	129.3	110.0	92.7	132.8	123.8
1400-1500	112.3	169.7	176.7	108.0	141.3	95.0	91.7	141.6	127.8
1500-1600	146.3	207.0	238.7	133.7	147.0	104.7	**101.3**	174.5	154.1
1600-1700	160.0	229.0	240.0	156.7	**172.0**	82.0	85.3	191.5	160.7
1700-1800	**164.7**	**236.0**	**265.7**	**158.0**	155.0	72.7	90.3	**195.9**	**163.2**
1800-1900	89.7	146.7	149.0	102.7	89.7	47.3	55.7	115.5	97.2
1900-2000	63.0	85.7	88.7	67.3	47.7	37.7	41.3	70.5	61.6
2000-2100	41.7	68.0	63.0	59.7	40.7	20.3	26.0	54.6	45.6
2100-2200	30.7	48.0	55.3	34.7	26.3	23.0	18.3	39.0	33.8
2200-2300	17.0	38.3	40.3	23.7	29.0	22.0	17.0	29.7	26.8
2300-2400	18.7	23.7	30.0	14.7	16.3	13.7	6.0	20.7	17.6
Totals									
0700-1900	1368.7	1919.0	2240.0	1522.0	1449.7	1027.0	873.7	1699.9	1485.7
0600-2200	1585.7	2209.3	2582.7	1817.3	1632.3	1125.3	975.7	1965.5	1704.0
0600-0000	1621.3	2271.3	2653.0	1855.7	1677.7	1161.0	998.7	2015.8	1748.4
0000-0000	1682.3	2364.7	2806.0	2015.0	1779.0	1207.3	1036.3	2129.4	1841.5
AM Peak	0700	1000	0700	0700	0700	1100	1100		
	126.7	143.7	187.7	195.0	109.3	114.7	78.7		
PM Peak	1700	1700	1700	1700	1600	1200	1500		
	164.7	236.0	265.7	158.0	172.0	118.0	101.3		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-512 -- English (ENA)

Datasets:

Site:	**[128717] Wagga Road - Thurgoona Drive to Windsor Avenue**
Attribute:	Lavington
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	11:12 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017,
Zone:	
File:	Wagga rd - Thurg dr to Windsor ave (606) aug17 .ec0 (Plus)
Identifier:	NR50QDFM MC5900-X13 (c)MetroCount 09Nov16
Algorithm:	Factory default axle (v5.02)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017 (20.9695)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	South (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 34454 / 73567 (46.83%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-512
Site: 128717.0.1NS
Description: **Wagga Road - Thurgoona Drive to Windsor Avenue**
Filter time: **11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017**
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(S) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
0000-0100	6.7	16.7	24.0	26.3	15.7	13.0	8.0	17.9	15.8
0100-0200	3.7	11.7	24.0	17.0	9.7	5.0	4.3	13.2	10.8
0200-0300	2.3	7.7	13.0	21.0	9.0	11.3	4.0	10.6	9.8
0300-0400	3.0	6.0	7.7	16.7	10.3	4.0	2.3	8.7	7.1
0400-0500	6.3	10.3	12.7	14.0	12.3	5.0	3.7	11.1	9.2
0500-0600	21.0	30.0	42.3	47.0	25.7	8.7	6.0	33.2	25.8
0600-0700	63.7	70.0	94.0	97.3	55.7	25.0	18.3	76.1	60.6
0700-0800	100.0	99.7	156.7	172.7	90.3	37.3	17.7	123.9	96.3
0800-0900	**161.3**	**187.7**	**256.3**	**234.7**	**158.0**	67.3	27.7	**199.6**	**156.1**
0900-1000	94.7	122.3	160.3	136.0	108.3	96.7	57.3	124.3	110.8
1000-1100	100.0	123.7	160.0	99.3	95.0	**97.0**	73.7	115.6	107.0
1100-1200	85.0	124.3	139.3	93.3	104.0	89.3	**73.7**	109.2	101.3
1200-1300	77.7	125.7	123.7	82.3	102.7	**80.7**	**88.3**	102.4	97.3
1300-1400	86.0	119.3	141.0	83.3	101.3	62.3	66.0	106.2	94.2
1400-1500	100.0	157.0	172.7	98.0	112.7	58.0	70.0	128.1	109.8
1500-1600	126.7	180.7	199.7	113.0	121.0	65.3	77.0	148.2	126.2
1600-1700	**157.7**	**249.3**	**263.7**	**161.3**	**144.3**	66.3	67.7	**195.3**	**158.6**
1700-1800	132.0	187.0	205.3	126.7	111.0	65.3	70.7	152.4	128.3
1800-1900	77.0	120.0	127.7	70.0	78.0	55.3	61.7	94.5	84.2
1900-2000	38.7	61.0	61.0	48.7	34.7	22.7	26.3	48.8	41.9
2000-2100	33.0	46.3	39.7	43.3	22.7	18.0	20.7	37.0	32.0
2100-2200	22.7	35.3	38.7	25.3	15.3	17.3	13.3	27.5	24.0
2200-2300	13.0	30.0	25.7	16.3	20.0	10.7	12.7	21.0	18.3
2300-2400	13.7	27.0	28.3	14.0	10.0	8.7	6.3	18.6	15.4
Totals									
0700-1900	1298.0	1796.7	2106.3	1470.7	1326.7	841.0	751.3	1599.7	1370.1
0600-2200	1456.0	2009.3	2339.7	1685.3	1455.0	924.0	830.0	1789.1	1528.5
0600-0000	1482.7	2066.3	2393.7	1715.7	1485.0	943.3	849.0	1828.7	1562.2
0000-0000	1525.7	2148.7	2517.3	1857.7	1567.7	990.3	877.3	1923.4	1640.7
AM Peak	0800	0800	0800	0800	0800	1000	1100		
	161.3	187.7	256.3	234.7	158.0	97.0	73.7		
PM Peak	1600	1600	1600	1600	1600	1200	1200		
	157.7	249.3	263.7	161.3	144.3	80.7	88.3		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-510 -- English (ENA)

Datasets:

Site:	**[128717] Wagga Road - Thurgoona Drive to Windsor Avenue**
Attribute:	Lavington
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	11:12 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017,
Zone:	
File:	Wagga rd - Thurg dr to Windsor ave (606) aug17 .ec0 (Plus)
Identifier:	NR50QDFM MC5900-X13 (c)MetroCount 09Nov16
Algorithm:	Factory default axle (v5.02)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017 (20.9695)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 73126 / 73567 (99.40%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-510
Site: 128717.0.1NS
Description: **Wagga Road - Thurgoona Drive to Windsor Avenue**
Filter time: **11:13 Monday, 17 July 2017 => 10:29 Monday, 7 August 2017**
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	12.7	31.7	53.3	52.7	35.0	26.0	19.7	37.1	33.0
0100-0200	7.7	22.3	53.0	30.7	19.7	8.7	11.0	26.7	21.9
0200-0300	4.3	16.7	22.3	37.3	16.3	22.0	9.0	19.4	18.3
0300-0400	7.0	15.7	14.7	36.7	21.0	6.0	6.0	19.0	15.3
0400-0500	18.7	20.7	32.7	39.0	28.0	9.7	7.0	27.8	22.2
0500-0600	53.7	68.7	100.7	105.0	64.0	21.0	13.3	78.4	60.9
0600-0700	145.3	158.7	229.7	231.0	123.7	42.3	34.7	177.7	137.9
0700-0800	226.7	224.0	344.3	367.7	199.7	73.3	36.0	272.5	210.2
0800-0900	**262.7**	**301.3**	**428.0**	**391.0**	**252.3**	119.0	59.0	**327.1**	**259.0**
0900-1000	182.7	226.7	322.7	264.3	194.0	178.3	116.7	238.1	212.2
1000-1100	193.0	267.3	321.3	182.7	194.0	**210.3**	151.0	231.7	217.1
1100-1200	176.0	265.7	292.7	186.7	210.3	204.0	**152.3**	226.3	212.5
1200-1300	168.0	281.7	282.7	181.7	223.3	**198.7**	**180.0**	227.5	216.6
1300-1400	191.3	266.7	315.7	190.7	230.7	172.3	158.7	239.0	218.0
1400-1500	212.3	326.7	349.3	206.0	254.0	153.0	161.7	269.7	237.6
1500-1600	273.0	387.7	438.3	246.7	268.0	170.0	178.3	322.7	280.3
1600-1700	**317.7**	**478.3**	**503.7**	**318.0**	**316.3**	148.3	153.0	**386.8**	**319.3**
1700-1800	296.7	423.0	471.0	284.7	266.0	138.0	161.0	348.3	291.5
1800-1900	166.7	266.7	276.7	172.7	167.7	102.7	117.3	210.1	181.5
1900-2000	101.7	146.7	149.7	116.0	82.3	60.3	67.7	119.3	103.5
2000-2100	74.7	114.3	102.7	103.0	63.3	38.3	46.7	91.6	77.6
2100-2200	53.3	83.3	94.0	60.0	41.7	40.3	31.7	66.5	57.8
2200-2300	30.0	68.3	66.0	40.0	49.0	32.7	29.7	50.7	45.1
2300-2400	32.3	50.7	58.3	28.7	26.3	22.3	12.3	39.3	33.0
Totals									
0700-1900	2666.7	3715.7	4346.3	2992.7	2776.3	1868.0	1625.0	3299.5	2855.8
0600-2200	3041.7	4218.7	4922.3	3502.7	3087.3	2049.3	1805.7	3754.5	3232.5
0600-0000	3104.0	4337.7	5046.7	3571.3	3162.7	2104.3	1847.7	3844.5	3310.6
0000-0000	3208.0	4513.3	5323.3	3872.7	3346.7	2197.7	1913.7	4052.8	3482.2
AM Peak	0800	0800	0800	0800	0800	1000	1100		
	262.7	301.3	428.0	391.0	252.3	210.3	152.3		
PM Peak	1600	1600	1600	1600	1600	1200	1200		
	317.7	478.3	503.7	318.0	316.3	198.7	180.0		

*** - No data.**

APPENDIX E – PROPOSED DEVELOPMENT PLANS

ETTAMOGAH RISE
DA PLANS
STAGES 6–9

OVERALL STAGE 2–9 STAGING PLAN

esler & ASSOCIATES

SURVEYORS CIVIL ENGINEERS
DEVELOPMENT CONSULTANTS

598 Macauley Street, Albury
p: (02) 6021–1322
64 Hammond Avenue, Wagga Wagga
p: (02) 6921–3312
31 Baker St, Wangaratta
p: (03) 5721–5688
f: (02) 6021–8563
w: www.eslers.com.au
e: engineering@eslers.com.au

FS520879

AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 6–12 (REVISION P)	27/11/18
2. STAGE 6–9 (REVISION Q)	11/12/18
3. BLUEPRINT COMMENTS ACTIONED	13/05/19
4.	
5.	
6.	
7.	
8.	
9.	
EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2. STAGE 4 EXISTING SURFACE	27/11/18
3.	
AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2. NEARMAP.COM	10/12/18
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

APPROVED:–

DATUM:	DRAWN:	DATE:
A.H.D	DSJ	NOV–2018

PROJECT No: 00016917 **REV: Q**

SHEET 1 OF 9 A1

STAGE	min 4,000sq.m ALLOTMENTS	min 1,500sq.m ALLOTMENTS	TOTAL ALLOTMENTS
1–3	18	132	150
4.	0	42	42
5.	0	42	42
6.	26	19	45
7.	22	22	44
8.	16	43	59
9.	17	14	31
	99	314	413

ROAD RESERVE DETAIL

- 13m ROAD RESERVE
  3.5m NATURESTRIP
  6m INVERT–INVERT
- 19m ROAD RESERVE
  5.5m NATURESTRIP
  8m INVERT–INVERT
- 22m ROAD RESERVE
  5.5m NATURESTRIP
  11m INVERT–INVERT
- 26m ROAD RESERVE
  4.5m NATURESTRIP
  2*6.6m INVERT–INVERT
  3.8m MEDIUM STRIP

CENTRAL RESERVE ROAD
GEROGERY ROAD
WAGGA ROAD
THIMBLE CRT
CANNON CRT
FENCHURCH AVE
CHANGE CRT
FLEET CRT
STAGE 8
STAGE 5
KENT ST
STRAND TERRACE
BASIN(D)
TRAFALGAR ST
LANTERN CRT
PENTONVILLE ST
FENCHURCH AVE
STAGE 9
DARROW ST
BASIN(E)
LIVERPOOL AVE
STAGE 4
COVENTRY ST
BASIN(C)
PARK
STRAND TERRACE
FENCHURCH AVE
WHITEHALL AVE
BOND ST
STAGE 7
BOND ST
EUSTON ST
BASIN(B)
BOW CRT
MARYLEBONE AVE
WINDSOR AVE
WHITEHALL AVE
PICADILLY ST
REGENT ST
FENCHURCH AVE
WATER RESERVOIR
LEICESTER ST
BASIN(A)
GREAT SOUTHERN RAILWAY
HUME HIGHWAY
STAGE 6
BASIN(F)
WHITEHALL AVE
WHITEHALL AVE
FENCHURCH AVE
STAGE 6
MARLBOROUGH ST
MARLBOROUGH ST
MUNIONG
WAGGA ROAD
HUME HIGHWAY

N
W E
S

H30 0 60 120 180
BAR SCALE

FILE PATH:– D:\00017271\Planning\16017 ARA Plans.dwg
DATE PLOTTED:– Tuesday, May 21, 2019

APPENDIX F – INTERSECTION ANALYSIS – 2028

LANE SUMMARY

Site: [Wagga Rd & Windsor Ave_AM Peak_2028]

Wagga Road and Windsor Avenue, Ettamogah
AM Peak Period
2028 Traffic Volumes
Site Category: (None)
Stop (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	93	5.0	1793	0.052	100	8.0	LOS A	0.0	0.0	Short	50	0.0	NA
Lane 2	144	5.0	1889	0.076	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	237	5.0		0.076		3.1	NA	0.0	0.0				
North: Wagga Rd (N)													
Lane 1	58	5.0	1889	0.031	27[6]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 2	204	5.0	1825	0.112	100	0.5	LOS A	0.1	0.7	Full	500	0.0	0.0
Approach	262	5.0		0.112		0.4	NA	0.1	0.7				
West: Windsor Ave (W)													
Lane 1	18	5.0	1001	0.018	100	8.3	LOS A	0.1	0.5	Full	500	0.0	0.0
Lane 2	175	5.0	500	0.350	100	14.2	LOS A	1.8	12.8	Full	500	0.0	0.0
Approach	193	5.0		0.350		13.6	LOS A	1.8	12.8				
Intersection	692	5.0		0.350		5.0	NA	1.8	12.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: [Wagga Rd & Windsor Ave_PM Peak_2028]

Wagga Road and Windsor Avenue, Ettamogah
PM Peak Period
2028 Traffic Volumes
Site Category: (None)
Stop (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	189	5.0	1793	0.106	100	8.0	LOS A	0.0	0.0	Short	50	0.0	NA
Lane 2	260	5.0	1889	0.138	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	449	5.0		0.138		3.4	NA	0.0	0.0				
North: Wagga Rd (N)													
Lane 1	67	5.0	1889	0.035	27[6]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 2	222	5.0	1720	0.129	100	1.2	LOS A	0.2	1.7	Full	500	0.0	0.0
Approach	288	5.0		0.129		0.9	NA	0.2	1.7				
West: Windsor Ave (W)													
Lane 1	12	5.0	869	0.013	100	9.0	LOS A	0.0	0.3	Full	500	0.0	0.0
Lane 2	96	5.0	362	0.264	100	17.1	LOS B	1.1	7.9	Full	500	0.0	0.0
Approach	107	5.0		0.264		16.2	LOS B	1.1	7.9				
Intersection	845	5.0		0.264		4.2	NA	1.1	7.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: 3728 [Wagga Rd & Thurgoona Dr/Kaitlers Rd_AM Peak_2028]

Wagga Road and Thurgoona Drive/Kaitlers Road, Ettamogah
AM Peak Period
2028 Traffic Volumes
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	58	5.0	288	0.202	85[6]	13.5	LOS A	0.8	6.0	Short	140	0.0	NA
Lane 2	63	5.0	264	0.238	100	22.0	LOS B	1.5	10.6	Full	500	0.0	0.0
Lane 3	251	5.0	351	0.714	100	21.7	LOS B	5.1	37.3	Short	110	0.0	NA
Approach	372	5.0		0.714		20.5	LOS B	5.1	37.3				
East: Thurgoona Dr (E)													
Lane 1	267	5.0	1112	0.240	100	10.2	LOS A	2.9	21.4	Short	60	0.0	NA
Lane 2	402	5.0	507	0.794	100	23.0	LOS B	10.7	77.8	Full	500	0.0	0.0
Approach	669	5.0		0.794		17.9	LOS B	10.7	77.8				
North: Wagga Rd (N)													
Lane 1	214	5.0	316	0.677	91[6]	18.4	LOS B	3.6	26.6	Short	140	0.0	NA
Lane 2	198	5.0	264	0.747	100	25.9	LOS B	5.3	38.6	Full	500	0.0	0.0
Lane 3	89	5.0	433	0.207	100	18.0	LOS B	1.6	11.3	Short	120	0.0	NA
Approach	501	5.0		0.747		21.3	LOS B	5.3	38.6				
West: Kaitlers Rd (W)													
Lane 1	382	5.0	721	0.530	100	13.2	LOS A	7.3	53.3	Full	500	0.0	0.0
Lane 2	19	5.0	236	0.080	100	25.1	LOS B	0.4	3.0	Short	50	0.0	NA
Approach	401	5.0		0.530		13.7	LOS A	7.3	53.3				
Intersection	1943	5.0		0.794		18.4	LOS B	10.7	77.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: 3728 [Wagga Rd & Thurgoona Dr/Kaitlers Rd_PM Peak_2028]

Wagga Road and Thurgoona Drive/Kaitlers Road, Ettamogah
PM Peak Period
2028 Traffic Volumes
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wagga Rd (S)													
Lane 1	112	5.0	230	0.486	85[6]	22.0	LOS B	2.4	17.7	Short	140	0.0	NA
Lane 2	129	5.0	227	0.571	100	24.6	LOS B	3.3	23.9	Full	500	0.0	0.0
Lane 3	266	5.0	399	0.667	100	20.7	LOS B	5.3	39.0	Short	110	0.0	NA
Approach	507	5.0		0.667		22.0	LOS B	5.3	39.0				
East: Thurgoona Dr (E)													
Lane 1	200	5.0	1148	0.174	100	9.5	LOS A	2.0	14.5	Short	60	0.0	NA
Lane 2	432	5.0	496	0.871	100	29.3	LOS C	13.3	96.7	Full	500	0.0	0.0
Approach	632	5.0		0.871		23.1	LOS B	13.3	96.7				
North: Wagga Rd (N)													
Lane 1	173	5.0	323	0.534	91[6]	14.2	LOS A	2.3	16.5	Short	140	0.0	NA
Lane 2	134	5.0	227	0.590	100	24.7	LOS B	3.4	24.8	Full	500	0.0	0.0
Lane 3	68	5.0	402	0.170	100	18.1	LOS B	1.2	8.4	Short	120	0.0	NA
Approach	375	5.0		0.590		18.7	LOS B	3.4	24.8				
West: Kaitlers Rd (W)													
Lane 1	355	5.0	729	0.486	100	13.6	LOS A	6.6	48.4	Full	500	0.0	0.0
Lane 2	16	5.0	240	0.066	100	25.0	LOS B	0.3	2.5	Short	50	0.0	NA
Approach	371	5.0		0.486		14.1	LOS A	6.6	48.4				
Intersection	1884	5.0		0.871		20.1	LOS B	13.3	96.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

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Ettamogah Rise – Traffic Impact Assessment – Additional Information

Background

Spotto Consulting prepared a Traffic Impact Assessment (TIA) for the proposed development in October 2018. This was submitted to Albury City Council as part of a Planning Proposal to increase the number of residential lots in Ettamogah Rise from 386 to 413.

Following preliminary assessment of the Planning Proposal, Council have requested additional information (Letter from David Christy dated 3 April 2019, Albury City Council reference DOC19/40234). In relation to the TIA, Council state on Page 6 of their letter that:

> *Further investigation in relation to the intersection of Central Reserve Road and Gerogery Road is recommended to confirm the need (or lack thereof) to further modify this intersection to improve safety, in consideration that 25% of total traffic daily traffic movements (approximately 888 vehicles per day) are likely to use this intersection under proposed development conditions. Currently the intersection of Central Reserve Road and Gerogery Road is a wide Y-intersection as opposed to a T, and consequently, this allows vehicles to travel through at some speed.*

Analysis

It is important that the impact of the Planning Proposal on the intersection of Central Reserve Road and Gerogery Road is considered in terms of the incremental impact of increasing the number of lots from 386 to 413: as noted in Section 4.1.1 of the TIA, "*the total increase in traffic generated by the site as a result of the proposed development is an additional 7% (commensurate with the increase in lot numbers)*".

Using the assumptions outlined in Section 4.1.1 of the TIA, it is possible to determine the change in turning movements at the intersection as a result of the proposed development. This is summarised in Figure 1 and Figure 2, below.

Figure 1 – AM Peak Hour Turning Movement Summaries – Approved and Proposed Development

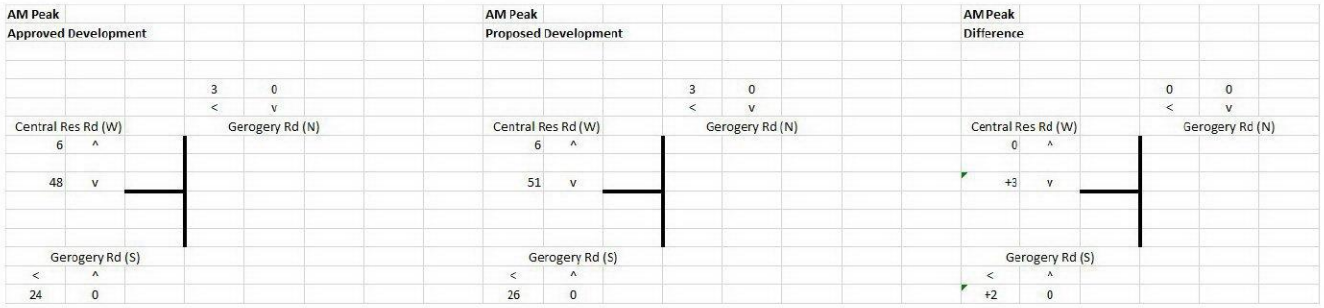
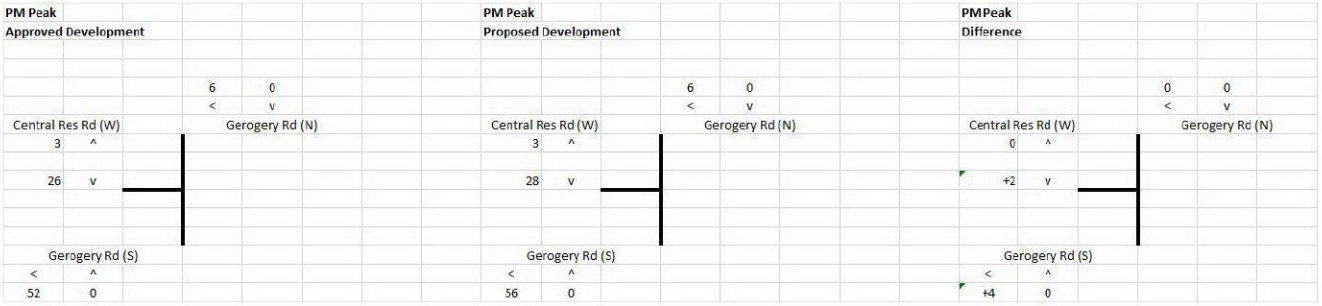


Figure 2 – PM Peak Hour Turning Movement Summaries – Approved and Proposed Development

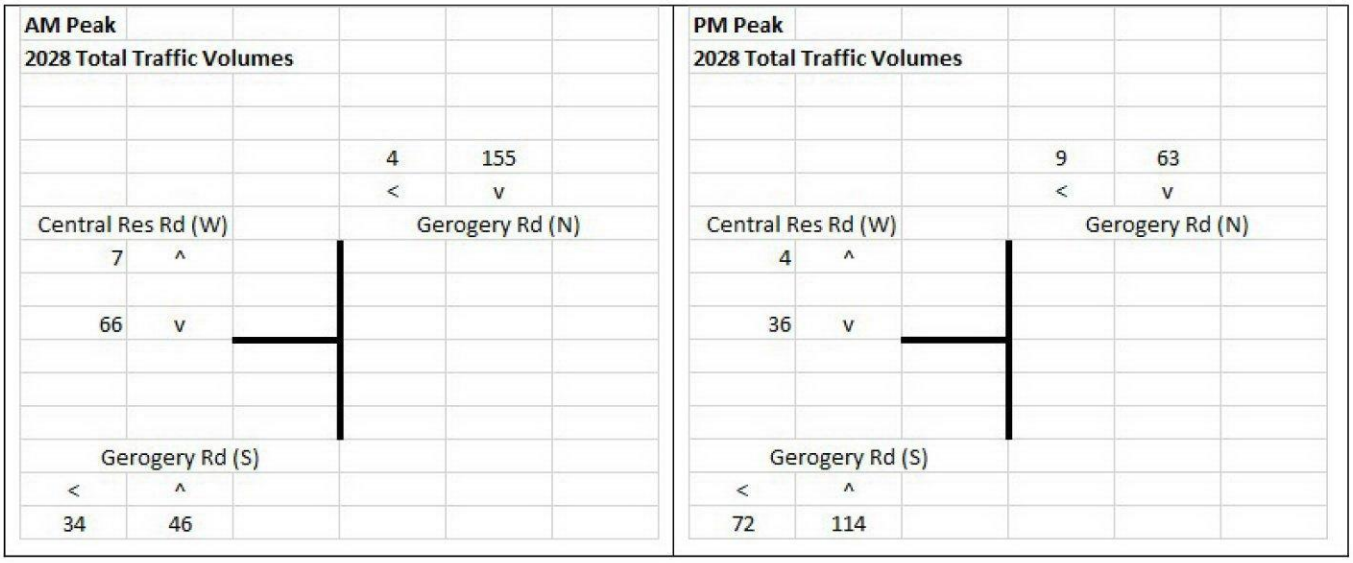


This shows that the incremental impact of increasing the number of lots from the approved 386 to the proposed 413 is no greater than 4 vehicles per hour on any one movement.

It is also possible to complete an assessment of the intersection to determine if any additional turning lanes are warranted. This was undertaken in the original TIA for the intersection of Wagga Road and Windsor Avenue, and, used the techniques outlined in the *Austroads Guide to Road Design Part 4: Intersections and Crossings*. Existing traffic volumes can be determined using Albury City Council data for Gerogery Road, while for Central Reserve Road, traffic volumes can be estimated based on the traffic generated by the existing 12 residential properties and quarry.

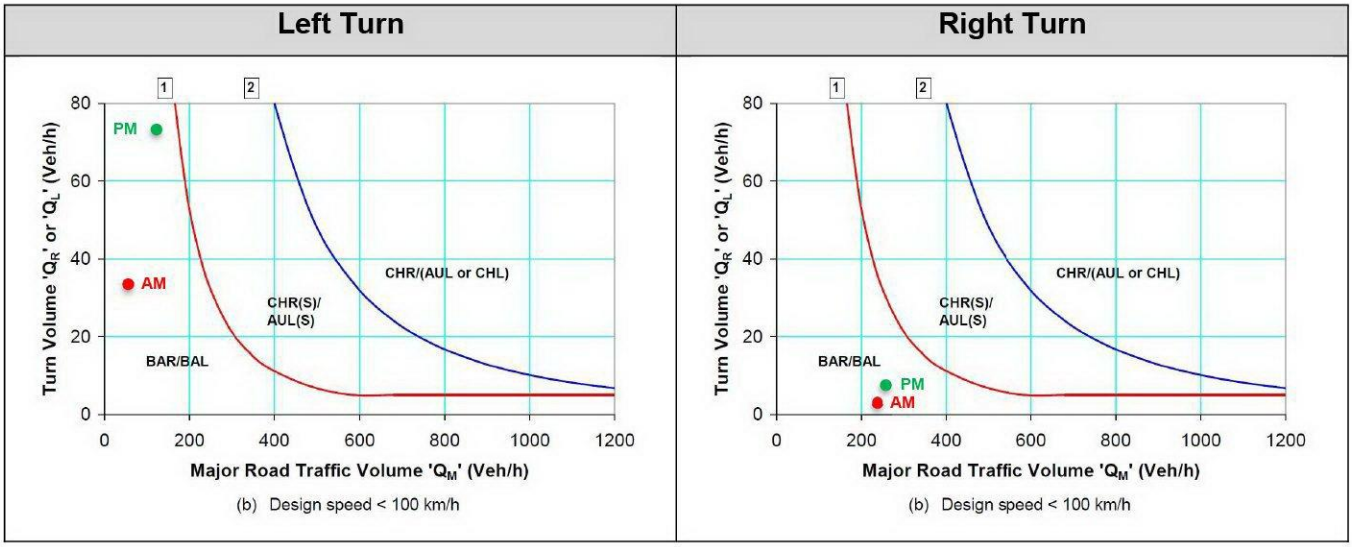
Using this, it is possible to determine the turning movements at the intersection of Gerogery Road and Central Reserve Road in 2028 for the AM and PM peak periods, using similar assumptions to those detailed in Section 4.1.1 of the TIA. Peak hour turning movements to 2028 are summarised in Figure 3, below.

Figure 3 – Peak Hour Turning Movement Summaries – 2028



An assessment has been carried out to determine whether the volume of traffic that will use the intersection is sufficient to warrant upgrading turning lanes. This has been carried out in accordance with the procedure outlined in Appendix A.8 of the *Austroads Guide to Road Design Part 4: Intersections and Crossings – General*, using the turning movements in Figure 3. These movements can then be used to determine the major road and left/right turning volumes (Q_M, Q_L/Q_R, respectively), which can then be plotted onto Figure A 10 from the *Austroads Guide to Road Design Part 4* to determine what upgrades, if any, are warranted. This is shown in Figure 4, below.

Figure 4 – Major Road and Turning Volumes – 2028



This shows that upgrading from the current basic intersection layout to incorporate auxiliary turning lanes is not warranted, taking into account growth in background traffic volumes to 2028 and additional traffic generated by the proposed development.

Conclusion

An assessment has been completed of the impact upon the intersection of Gerogery Road and Central Reserve Road of increasing the number of residential lots at Ettamogah Rise from 386 to 413. The incremental impact of the proposed development is no greater than 4 vehicle movements per hour for any one turning movement at this intersection.

An assessment of turning movements at the intersection at 2028 has shown that providing auxiliary turning lanes at the intersection is not warranted.

In response to the issue raised by Albury City Council, it is concluded that the incremental impact is minimal, and there are no upgrades warranted to the intersection as a result of the proposed development.

Steven Swann
Spotto Consulting

21 May 2019

APPENDIX D:

Applicable goals and directions of the *Riverina Murray Regional Plan 2036*

Goals and directions of the *Riverina Murray Regional Plan 2036*	Planning Proposal consistency
Goal 4: Strong, connected and healthy communities	
• *Direction 22: Promote the growth of regional cities and local centres* • *Direction 23: Build resilience in towns and villages* • *Direction 25: Build housing capacity to meet demand* • *Direction 26: Provide greater housing choice*	Consistent: The Planning Proposal identifies that to support population changes, there will be demand for new housing and a greater variety of housing. Making more housing available in existing zoned residential areas will be more sustainable because it takes advantage of existing infrastructure and services.

APPENDIX E:

Ettamogah Outline Development Plan (amended)

APPENDIX E

ETTAMOGAH OUTLINE DEVELOPMENT PLAN

1.1 INTRODUCTION

This Appendix of the DCP applies to land either side of ~~the former Hume Highway~~Wagga Road, Ettamogah as shown in the Outline Development Plan in Figure 1.1. The land to the ~~E~~east of ~~the highway~~Wagga Road is designated for development as a B7 Business Park Zone and the land to the w~~W~~west as an R2 Low Density Residential Zone.

This Appendix seeks to ensure the orderly and sustainable development of land in the Ettamogah area, as well as, identifying distinct opportunities and constraints regarding the special nature and character of the area, which need to be addressed. In order to reflect the site's opportunities and constraints, guidelines need to be developed that are based on the findings of the Environmental Study previously undertaken for the land.

Where circumstances warrant, the Council may consent to minor variations from this Plan with respect to road and lot boundaries, building envelopes and other development ~~standards~~ guidelines where sufficient evidence is presented by the applicant justifying the variation.

Notation

Please refer to the geo-technical report prepared by Coffey Geosciences P/L titled: "Limited Environmental Site Assessment Ettamogah Rural Lease Site 2 (Party-Unlimited Homestead), Ettamogah NSW". Specific reference is made to the Conclusions Section on Page 6 of this report that, amongst other things, recommends that during redevelopment contaminated soil in the area of BH5 should be segregated to a depth of 0.5 of a metre to ensure that soil is either treated to reduce contaminant concentrations or appropriately disposed of at a licensed landfill facility. Further reference is also directed to Appendix J of this DCP, which relates to Contaminated and Potentially Contaminated Land.

It is important ~~to~~ that development complies with all relevant Parts of this DCP. Applicants should ensure that all Parts of the DCP have been checked for relevance, not just the Part that refers to the relevant zone, the predominant development category or the most obviously relevant list of controls.

1.2 GENERAL AIMS & OBJECTIVES

Objectives

1. To conserve and enhance the existing aesthetic character and public amenity of Albury.
2. To outline realistic environmental and development limits for the site/s.

3. To ensure a high standard of development which utilises Environmentally Sustainable Development (ESD) Principles and best practice environmental management techniques.
4. To utilise the principles of 'place management'.
5. To ensure rural residential and light industrial developments occur in a sympathetic manner to one another.

1.3 RESIDENTIAL DEVELOPMENT

1.3.1 Subdivision

Objective

1. To provide for a variety of low density residential lot sizes that are designed having regard to the construction and opportunities presented by the land and to minimise impacts on the environment.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

i. Subdividing generally in accordance with the parameters expressed in the Outline Development Plan (see Figure 1.1).
ii. Where 'battleaxe' lots or similar are permitted, the access corridor is not to be considered in the calculation of lot sizes.
iii. Lots in the area denoted ~~blue~~ pink in Figure 1.1 being at least 1,500m^2.
iv. Lots in the area denoted ~~green~~ brown in Figure 1.1 being at least 4,000m^2.
v. Having regard to the findings of the *Ettamogah Environmental Study* in the subdivision design.
vi. Areas of degraded land (e.g. drainage lines) being rehabilitated as part of the subdivision.
vii. Existing vegetation being retained and incorporated into the subdivision where possible.
viii. Street trees to be provided by the developer in accordance with Council requirements for the location and type of species.
ix. Linking public open space with the Albury-Wodonga Regional Parklands network.
x. Introducing recreational elements into open space areas to encourage its use by residents.
~~xi. Constructing a minimum 4 metre high landscaped earth mound between the former Hume Highway carriageway and the subject land.~~
~~xii. Maintaining and/or implementing a minimum 25 metre landscaping strip along the eastern boundary with the Hume Highway and dedicating this land as a public open space link.~~
xi~~i~~i. Subdivision design to have regard for the requirements of the *NSW Rural Fire Service Planning for Bushfire Protection Guidelines*, NSW Government

xiv. Roads being constructed in accordance with ~~the pavement designs recommended in the *Ettamogah Environmental Study*~~.Council's *Engineering Guidelines for Development and Subdivisions*.

xv. All lots being provided with vehicular access and constructed in accordance with Council specifications.

xvi The long axis of lots being perpendicular or parallel to the contours of the land.

xvii. Perimeter fencing being constructed prior to the sale of lots.

1.3.2 Services and Infrastructure

Objective

1. To provide the estate with the full range of services and infrastructure necessary to cater for the needs of the preferred type/s of land uses.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

i. Requiring reticulated water and sewerage, underground power and telecommunication facilities to be provided to all lots as a pre-requisite of subdivision in accordance with the Council's *Engineering Guidelines for Development and Subdivisions*~~*Albury City Engineering Development Standards*~~ and the *NSW Rural Fire Service Planning for Bushfire Protection* ~~*G*~~*guidelines.*

ii. Internal roads being designed and constructed in accordance with Council's ~~standards for Rural Development (see Section 9.2.9 of this DCP).~~*Engineering Guidelines for Development and Subdivisions*.

iii. Providing a kerbside waste disposal service.

1.3.3 Building Siting

Objective

1. To ensure that buildings are located to the lot's advantage and to ensure adequate separation from adjoining dwellings and other land uses is achieved.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

~~i. No dwelling being erected within 70 metres of the former Hume Highway carriageway (with the 4 metre high barrier in place).~~

~~i~~ii. No building being erected at a place where the slope exceeds 20%.

~~i~~iii. Dwellings being orientated to maximise solar access.

ii~~i~~iv. Buildings being setback at least 10 metres from the front and rear boundary of the property.

iv. Buildings being setback at least 5 metres from side boundaries.

~~vi. Buildings being setback at least 50 metres from the boundary of the 'Muniong' property.~~

~~vii. No building being permitted above the 240 metre AHD contour.~~

~~viii. No buildings being permitted within 50 metres of the pedestrian/cyclist reserve situated along the common boundary with DriveTrain Systems.~~

1.3.4 Building Design

Objective

1. To ensure dwellings and ancillary buildings are constructed of materials and colours that blend with the surrounding environment and area energy efficient.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

i. Avoiding the dominant use of reflective materials such as zincalume or glass, or colours such as white, for building exteriors.
ii. Multi-storied or multi-levelled buildings to be designed to accord with the site slope (e.g. levels to be staggered up the slope).
iii. The ground floor level of a building to be no more than 1.0 metre above natural ground level and site cuts should not exceed 1.0 metre in depth.
iv. The distance between the floor level and the underside of the eaves to be no more than 2.7 metres for a single storey house and no more than 5.0 metres for a two storey house.
v. The siting of a new dwelling and/or ancillary buildings takes into account the siting and design of any buildings on adjoining land.
vi. Locating all ancillary buildings behind the front building line of the dwelling.
vii. Restricting the total area of detached ancillary buildings to $80m^2$.
viii. Fencing being of post and wire construction.
ix. Impervious fencing material such as brick or timber palings may only be used to contain one area of no more than $40m^2$.
~~x. Metal fences (including colorbond) are not permitted in any circumstances.~~
~~xi.~~x. Utilising building materials and orientating buildings to maximise energy efficiency.

1.3.5 Landscaping

Objective

~~1.~~ To enhance the residential amenity and appearance of the land from ~~the former~~ ~~2.~~1. ~~Hume Highway~~Wagga Road.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

~~i. Dedicating the existing strip of trees along the boundary of the former Hume Highway as an open space link~~.

ii. Encouraging residents to landscape as much of their lot as possible.

~~iii. For lots in the area denoted green in the Outline Development Plan (see Figure 1.1), implementing perimeter landscaping to screen adjoining dwellings and for wind break purposes~~.

iiv. Providing landscaped 'screens' to outdoor living areas (e.g. swimming pools), impervious fences and ancillary buildings (e.g. garden sheds).

iiiv. Retaining existing trees where possible (including dead specimens if they represent potential native bird habitat).

ivvi. Utilising native indigenous species of flora.

~~vii. A minimum 10 metre wide landscaped buffer being established along the rear/ side boundary of those lots that adjoin the pedestrian/cyclist reserve situated along the common boundary with DriveTrain Systems.~~

1.3.6 Open Space and Recreation Facilities

Objective

1. To ensure that adequate levels of open space and recreation facilities are provided in appropriate locations that will benefit both the neighbourhood and the public in general.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

~~i. Maintaining a landscaped open space buffer between the subject land and One Tee Hill (to the West).~~

~~ii. Dedicating the existing landscaped strip along the former Hume Highway frontage as public open space~~.

~~ii~~i. Incorporating open space into the overall design of a development.

iiv. Utilising existing natural landscape features for open space (e.g. drainage lines, vegetated areas).

~~v. Maintaining open space areas visible to the public to a high standard in recognition of the positioning of the land at the major Northern entrance to Albury-Wodonga.~~

~~vi. Dedicating a 50 metre wide strip of land along the common boundary with DriveTrain Systems (as shown on the Outline Development Plan) as a pedestrian/cyclist reserve.~~

~~vii. Dedicating a minimum 50 metre strip of land over the existing East-West aligned pipeline servicing the Red Light Hill Reservoir as a wildlife corridor~~.

1.3.7 Drainage and Watercourses

Objectives

1. To ensure that no detrimental effects to the environment are caused by the discharge of stormwater from individual lots and the land as a whole.
2. That watercourses and water quality are maintained at the standard experienced prior to development of the land.

Controls

In assessing a development proposal, Council will consider whether the Objectives have been achieved by:

i. Development applications having regard to Council's *Soil and Water Management Policy* (including the need for a Soil and Water Management Plan)
ii. Implementing the recommendations for drainage in the *Ettamogah Environmental Study*.
iii. Incorporating watercourses and drainage lines into the overall design of the subdivision.
iv. Encouraging on-site treatment of stormwater.
v. Encouraging the integration of drainage and open space areas.

1.4 DEVELOPMENT IN THE B7 BUSINESS PARK ZONE

The B7 Business Park Zone applies to land located on the Northern outskirts of the City and is identified within the *Albury Land Use Strategy, 2007* as having an important strategic role as a transport interchange and employment generator for the City. Like the B6 Enterprise Corridor Zone, this site requires the creation of a well-designed and highly attractive development as it is highly visible from a key road entry point to Albury.

1.4.1 Services and Infrastructure

Objective

1. To provide the Zone with the full range of services and infrastructure necessary to cater for the needs of the preferred type/s of land uses.

Controls

i. Reticulated water and sewerage, underground power and telecommunication facilities shall be provided by the applicant as part of subdivision.

ii. Services shall be designed to accommodate the range of preferred land uses and the full development of the Zone.

iii. All wastes generated from the site shall be removed and disposed in accordance with the requirements of the consent authority and if necessary, the Environment Protection Authority (EPA).

1.4.2 Preferred Land Uses

Objective

1. To attract 'clean' industries which have a low impact on the amenity of the surrounding area.

Controls

i. Land use and development shall be consistent with the objectives of the B7 Business Park Zone in the LEP.

ii. Land use and development shall be consistent with the objectives of any Outline Development Plan prepared for the zone.

iii. Offensive and hazardous industries are prohibited by the LEP.

iv. Retail land uses and development shall only be granted consent where they are ancillary to the principal use of the site or principally servicing other activities in the Zone.

v. In considering all other development , Council shall only grant consent if it is satisfied that it will not impact negatively on other activities being undertaken in the Zone, or that it will not prejudice the likelihood of attracting other 'clean' industries to the Zone.

vi. In considering all other development, Council shall only grant consent if it is satisfied that it will not impact negatively on the amenity of residents opposite ~~or the Ettamogah Sanctuary (e.g. hours of operation, noise, odour, appearance etc.)~~.

1.4.3 Building Envelopes

Objective

1. To ensure that buildings are sited to provide sufficient area for landscaping, car parking and separation from adjoining land uses.

Controls

i. Buildings shall not occupy more than 50% of the site area

ii. Buildings shall be located at least:
- 20 metres from a watercourse.
- 10 metres from the front boundary of the property.

- 3 metres from side boundaries.
- ~~50 metres from the Ettamogah Sanctuary.~~
- 15 metres from the boundary with the railway reserve.

1.4.4 Building Design

Objective

1. To present an image for the zone of 'clean' industry through buildings of appropriate scale, construction materials, colours and energy efficiency.

Controls

i. Development shall avoid the use of metal cladding (including colorbond) for walls of buildings, unless utilised as an architectural element in the design.
ii. Development shall avoid 'box-style' industrial buildings.
iii. Development shall take into account the siting and design of adjoining buildings (if any).
iv. Development shall avoid large expanses of uninterrupted walls in favour of alternative building materials or treatment of the wall with architectural features.
v. The front facades of buildings shall be designed in a manner that provides interest to the streetscape.
vi. Development shall use colours which complement or highlight the style of the building.
vii. The use of large areas of glass or other reflective material will only be permitted where glare is not created as a result.
viii. Buildings shall be designed and located so that no fencing is necessary forward of the building façade.
ix. Buildings should be oriented to make appropriate use of solar energy, be sited and designed so that the energy efficiency of existing buildings are not unreasonably reduced.
x. Developments should be designed so that solar access to North~~h~~ facing windows are maximised.
xi. Buildings should be articulated with appropriate vertical and horizontal variations to ensure an appropriate year round variation of shade and sunlight according to the heating/cooling needs and shadow patterns across glazed surfaces during seasonal changes tthrough the year.
~~xii.~~xi. Buildings should be constructed of materials and using designs which improve thermal mass.
~~xiii.~~xii. Buildings should provide for natural cross-ventilation.
xiv. Development shall have regard to the Hume Highway and its role as the Northern entrance to Albury-Wodonga at this location.

1.4.5 Landscaping Requirements

Objective

1. To enhance the appearance of the zone and Northern entrance to Albury-Wodonga along the Hume Highway and Great Southern Railway.

Controls

i. A minimum of 15% of any lot shall be dedicated to landscaping.
ii. A minimum of 4 metres from the front boundary and 6 metres from the rear boundary for the widthh of the property (excluding driveways), shall be dedicated to landscaping.
iii. A minimum of 2 metres along the sides of the lot shall be dedicated to landscaping.
iv. Landscaped 'screens' shall be provided to outdoor storage areas, fences or undesirable visual aspects of the building (e.g. loading bays).
v. Shade to outdoor public and employee areas shall be provided.
vi. The Hume Highway frontage shall be provided with designed landscaping, having regard to its contribution to the visual amenity of road users.
vii. Landscape islands and bays shall be utilised in large car parking areas.
~~vii.~~viii. ~~viii.~~ Landscaping shall be maintained and enhanced (where possible).
ix. Existing trees shall be retained where possible (including dead specimens if they represent potential native bird habitat).
x. Native indigenous species of flora shall be utilised.

1.4.6 Signage

Objective

1. To effectively convey a message without intruding on the visual amenity of the surrounding area or affecting the function of the Hume Highway.

Controls

i. Developers shall be encouraged to achieve a high quality in design and construction of signs.
ii. The number of signs per building and site shall be minimised to avoid clutter and visual confusion.
iii. Signs shall be integrated into the design of buildings.
iv. Signage shall generally be restricted to corporate and/or product identification (i.e. restrict general advertising).

v. The content of signage shall be related to the activity being conducted on the land where it is located.

vi. Billboard type signage shall not be permitted.

vii. Signage shall not be directed specifically towards the railway line.

viii. Signage shall be for the purposes of site and/or building identification rather than promotion.

ix. Signage shall be in proportion to the scale of the building and the size of the site (i.e. avoid the use of whole walls for signage etc.).

x. It is preferable that approval for signage be sought simultaneously with the development and/or use of the land.

xi. Applicants shall have consideration for the impact of signage on the entrance to Albury-Wodonga.

xii. Signage for multiple tenanted buildings shall be co-ordinated and consolidated into one sign.

xiii. Applications shall be in accordance with Part 164 of this DCP, which relates to Outdoor Advertising.

1.4.7 Access and Parking

Objective

1. To ensure that development is designed to allow for the safe movement of all vehicles in and around the site, and that the supply of car parking spaces meets the demand generated by the use of the land.

Controls

i. Intersections with the Hume Highway shall be upgraded to a standard necessary to accommodate traffic generated by the zone.

ii. In the absence of a car parking demand analysis being submitted with an application for development, car parking shall be provided in a coordinated manner, for each component land use and in accordance with the standards and rates outlined in Part 17 of this DCP, which relates to Off Street Car Parking.

iii. Future car parking should be concentrated into consolidated off-street locations and accessed primarily from internal circulation streets.

iv. Employee car parking shall be located behind the front building line.

v. Sufficient parking shall be provided for the number and turnover of visitors generated by the activity on the site.

vi. Car parking shall not be located within the building setback.

vii. Visitor car parking shall be clearly sign posted and made available for this purpose at all times.

viii. All access, manoeuvring and parking areas shall be constructed of concrete, asphalt or some other form of hardstand material approved by Council.

ix. Applicants shall ensure sufficient manoeuvring area on site so all vehicles exit the site in a forward direction.

x. Entrances and exits shall be located and designed to provide sufficient views of passing traffic.

xi. Vehicle crossovers shall be designed and constructed in accordance with Council's standard for the type of land use.

xii. Car parking areas shall be screened from public view as much as possible.

1.4.8 Open Space

Objectives

1. To maximize the area available for both formal and informal outdoor use and provide a high level of amenity for the zone.

Controls

i. A landscaped open space buffer shall be maintained between the zone, the Great Southern Railway ~~and the Ettamogah Sanctuary~~.

ii. Open space in the zone shall be linked with the Albury-Wodonga Regional Parklands network.

iii. Open space shall be incorporated into the overall design of each development in the zone.

iv. The remains of the old Ettamogah Winery shall be incorporated into the open space network if not required for commercial development.

v. The existing natural landscape features shall be utilised in the zone.

vi. Landscaped outdoor recreation areas shall be provided for employees on each site.

vii. Open space areas shall be maintained to a high standard to reinforce an image of quality and professionalism for the zone.

1.4.9 Drainage and Watercourses

Objective

1. To ensure that no detrimental effects to the environment are caused by the discharge of stormwater from individual lots and the zone as a whole, and the watercourses and water quality are maintained at the standard experienced prior to development of the zone.

Controls

i. Development applications shall have regard to Council's *Soil and Water Management Policy* (including the need for a Soil and Water Management Plan).

ii. Recommendations for drainage in the *Ettamogah Environmental Study* shall be implemented.

iii. Applicants shall be responsible for all stormwater generated on the site and by the development.

iv. Watercourses and drainage lines shall be incorporated into the overall design of the development sites.

v. On-site storage and treatment of stormwater is encouraged.

vi. No polluted drainage shall be discharged from the zone.

vi. Integration of drainage and open space areas is encouraged for development within the zone.

Figure 1.1

ETTAMOGAH OUTLINE DEVELOPMENT PLAN

ETTAMOGAH RISE DA PLANS STAGES 6–9

ETTAMOGAH OUTLINE DEVELOPMENT PLAN

esler & ASSOCIATES

SURVEYORS CIVIL ENGINEERS
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FS520879

AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 6–12 (REVISION P)	27/11/18
2. STAGE 6–9 (REVISION Q)	11/12/18
3. BLUEPRINT COMMENTS ACTIONED	13/05/19
4.	
5.	
6.	
7.	
8.	
9.	

EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2. STAGE 4 EXISTING SURFACE	27/11/18
3.	

AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2. NEARMAP.COM	10/12/18
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

CHECKED:–

APPROVED:–

DATUM:	DRAWN:	DATE:
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PROJECT No: 00016917 **REV: Q**

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DATE SHEET PRINTED:– (Monday, June 03, 2019)

H50 0 100 200 300
BAR SCALE

N
W E
S

CENTRAL RESERVE ROAD
(NOT CONSTRUCTED)
GEROGERY ROAD
INDUSTRIAL LAND
RW HENRY DRIVE
WAGGA ROAD
GREAT SOUTHERN RAILWAY
(NO BUILD AREA)
ETTAMOGAH SANCTUARY (CLOSED)
TWYNAM CRT
(NO BUILD AREA)
HUME HIGHWAY
GEROGERY ROAD
UNUSED ROAD RESERVE
WAGGA ROAD
POSSIBLE FUTURE LINK WITH ELIZABETH MITCHELL DRIVE &/OR INTERNAL BY–PASS
(NO BUILD AREA)
WATER RESERVOIR
HENSHAW CRT
ETTAMOGAH ROAD
GREAT SOUTHERN RAILWAY
WAGGA ROAD
MUNIONG
(50m WIDE WILDLIFE CORRIDOR)
HUME HIGHWAY
GREAT SOUTHERN RAILWAY
WAGGA ROAD

LEGEND

- DEVELOPMENT CONTROL PLAN BOUNDARY
- ENVIRONMENTAL LINKS
- NO BUILD AREA
- ASSET PROTECTION ZONE (10m or 15m WIDE)
- LANDSCAPE BUFFER
- PUBLIC OPEN SPACE/DUAL USE (STORMWATER DETENTION)
- INTERSECTION TREATMENT (TRAFFIC CONTROL)
- MINIMUM LOT SIZE 1500sq.m
- MINIMUM LOT SIZE 4000sq.m
- LOT SIZE BASED ON MERIT (COMPLIANCE WITH DCP)
- CURRENTLY ZONED AD MINIMUM LOT SIZE 1,000,000sq.m

APPENDIX F:

Reticulated Services Assessment

Our Ref: 17371 Infrastructure Report
Your Ref:

sma@eslers.com.au

11-12-2018

Ettamogah Rise Estate
629 Wagga Road & 43 One Tree Lane, ETTAMOGAH & SPRINGDALE HEIGHTS
Lot 102 & 103 DP1120977
Infrastructure Report

SCOPE

The development is a low-density residential subdivision situated at 629 Wagga Road, Ettamogah and 43 One Tree Lane, Springdale Heights. The site is subject to current Development Consent reference: 10.2012.32005.3 which approves 337 lots. 48 lots have been developed with a further 53 lots nearing completion. This report is associated with the planning proposal to increase the overall number of lots within the estate by a total of 27. This report is to be read in conjunction with the planning proposal.
Less 47 [min 4,000sq.m lots], replaced with 74 [min 1,500sq.m lots] = additional 27 lots

METHODOLOGY

Service authorities have been contacted in relation to the existing Development Consent and the current development. Concept servicing of the proposed development area has been investigated which has led to concept strategies to service the site.

ROADS

Responsible Authority: Albury City Council.
The site is the ongoing progression of a low-density subdivision with the proposed internal road network identified on the site layout plans. The proposed internal road dimensions are to be in accordance with Albury City Council guidelines which define road reserve and pavement widths. The addition of 27 lots can be accommodated within the current road network.

DRAINAGE

Responsible Authority: Albury City Council.
The proposed internal stormwater drainage design will be in accordance with Albury City Council guidelines. This existing network will be extended into the proposed subdivision. The existing and proposed drainage infrastructure can cater for the additional 27 lots.

SEWERAGE
Responsible Authority: Albury City Council
Existing Council sewer infrastructure (underground mains) service the site. A trunk sewer gravity main (225 diameter) has been designed and partly constructed which runs northerly within the site. This trunk main along a network of contributing gravity sewer lines will provide sewer coverage to the whole of the site. The proposed internal sewer design will be in accordance with Albury City Council guidelines. The existing and proposed sewer infrastructure can cater for the additional 27 lots.

WATER
Responsible Authority: Albury City Council
Existing water infrastructure (underground mains) service the site. A trunk water main (high level supply) has been constructed and runs northerly through the site This trunk water main provides additional water pressure to lots located on higher elevations. This existing network will be extended into the proposed subdivision along the future road nature strips. The proposed internal water design will be in accordance with Albury City Council guidelines. The existing and proposed water infrastructure can cater for the additional 27 lots.

GAS
Responsible Authority: APA gas networks
Existing gas infrastructure (underground mains) service the site. This existing network will be extended into the proposed subdivision along the future road nature strips. The existing and proposed gas infrastructure can cater for the additional 27 lots.

ELECTRICITY
Responsible Authority: Essential Energy
Existing electrical infrastructure (underground mains) service the site. This existing network will be extended into the proposed subdivision along the future road nature strips with additional sub-stations sited strategically within the estate. The existing and proposed electrical infrastructure can cater for the additional 27 lots.

TELECOMMUNICATIONS
Responsible Authority: NBN
Existing telecommunications infrastructure (underground pit and pipe) service the site. This existing network will be extended into the proposed subdivision along the future road nature strips. The existing and proposed telecommunications infrastructure can cater for the additional 27 lots.

Should you have any questions or require further information regarding the above, please contact Stephen Altmeier, phone (02) 6058 0100.

Yours faithfully
ESLERS LAND CONSULTING

Per:

Stephen Altmeier

APPENDIX G:

Applicable State Environmental Planning Policies

State Environmental Planning Policy	Applicable?	Aims of policy, if applicable?	Consistent?	Assessment
SEPP No. 55 – Remediation of Land	Yes (applies to NSW)	*(1) The object of this Policy is to provide for a Statewide planning approach to the remediation of contaminated land.* *(2) In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment:* *(a) by specifying when consent is required, and when it is not required, for a remediation work, and* *(b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and* *(c) by requiring that a remediation work meet certain standards and notification requirements.*	Yes	The Planning Proposal does not derogate the aims of *SEPP No. 55 – Remediation of Land.* For the purposes of clause 6 of *SEPP No. 55 – Remediation of Land* and *Managing Land Contamination: Planning Guidelines* (DUAP & EPA, 1998) the Land: • is not located within an "investigation area" which means land declared to be an investigation area by a declaration in force under Division 2 of Part 3 of the *Contaminated Land Management Act 1997*; and • is not land listed on Council's contaminated land register. Currently the DCP provides the following note at Appendix E (p. 1) – ***Notation*** *Please refer to the geo-technical report prepared by Coffey Geosciences P/L titled: "Limited Environmental Site Assessment Ettamogah Rural Lease Site 2 (Party-Unlimited Homestead), Ettamogah NSW". Specific reference is made to the Conclusions Section on Page 6 of this report that, amongst other things, recommends that during redevelopment contaminated soil in the area of BH5 should be segregated to a depth of 0.5 of a metre to ensure that soil is either treated to reduce contaminant concentrations or appropriately disposed of at a licensed landfill facility. Further reference is also directed to Appendix J of this DCP, which relates to Contaminated and Potentially Contaminated Land.* Also, Condition B16 of Development Consent 10.2012.32005.4 provides – ***(B16) Contamination****)* *Prior to the issue of a Construction Certificate for Stages 8 and 9, a Preliminary Investigation Report is to be prepared by a suitably qualified*

State Environmental Planning Policy	Applicable?	Aims of policy, if applicable?	Consistent?	Assessment
				person in accordance with clause 6 of State Environmental Planning Policy 55 – Remediation of Land and Managing Land Contamination Planning Guidelines: SEPP 55 – Remediation of Land (DUAP & EPA, 1998) and submitted to Council. The report is to investigate the suitability of land in those stages for residential use due to known past agricultural activities with any recommended remedial works arising being completed prior to the issue of a Subdivision Certificate for Stages 4 and 8 with documentary evidence of same being provided to Council.
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007	Yes	*This policy provides that the erection of temporary structures is permissible with consent across the State, whilst also ensuring safety and environmental factors are considered.* *It also provides that development comprising the subdivision of land, the erection of a building or the demolition of a building, to the extent to which it does not already require development consent under another environmental planning instrument, cannot be carried out except with development consent*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Infrastructure) 2007	Yes	*Provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Exempt & Complying Development Codes) 2008	Yes	*Streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy No. 36 – Manufactured Home Estate	Yes	*Helps establish well-designed and properly serviced manufactured home estates (MHEs) in suitable locations. Affordability and security of tenure for residents are important aspects. The policy applies to Gosford, Wyong and all local government areas outside the Sydney Region. To enable the immediate development of estates, the policy allows MHEs to be located on certain land where caravan parks are permitted. A section 117 direction issued in conjunction with the policy guides councils in preparing local environmental plans for MHEs, enabling them to be excluded from the policy*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy No. 24 – Caravan Parks	Yes	*Ensures that where caravan parks or camping grounds are permitted under an environmental planning instrument, movable dwellings, as defined in the Local Government Act 1993, are also permitted. The specific kinds of movable dwellings allowed under the Local Government Act in caravan parks and camping grounds are subject to the provisions of the Caravan Parks Regulation. The policy ensures that development consent is required for new caravan parks and camping grounds and for additional long-term sites in existing caravan parks. It also enables, with the council's consent, long-term sites in caravan parks to be subdivided by leases of up to 20 years*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land

APPENDIX H:

Applicable Directions under section 9.1(2) of the *Environmental Planning and Assessment Act 1979*

Local Planning Directions	Applicable?	Requirement	Consistency? (consistent; justifiably inconsistent; inconsistent)
2. Environment and Heritage			
2.1 Environment Protection Zones	Yes	*Environmentally sensitive areas should be protected and conserved*	Consistent: The Land is not known to contain any environmentally sensitive areas and the Planning Proposal does not derogate the objective of this Direction.
2.3 Heritage Conservation	Yes	*Items, areas, objects and places of environmental heritage significance and indigenous heritage significance should be conserved*	Consistent: The Land subject of the Planning Proposal is not known to contain any items, areas, objects or places of Aboriginal or European cultural heritage significance and the Planning Proposal does not derogate the objective of this Direction. The Land adjoins an old homestead called 'Muniong' which was built in 1874 by Captain J. D. Lankester. This residence is listed as a heritage item in Albury's LEP. The residence and its curtilage have been excised as small rural residential allotment from the broader rural area and is in private ownership. The Planning Proposal will not impact on this heritage item Previous investigations of Aboriginal Cultural Heritage in 2001 concluded the Land did not contain items, areas or objects of indigenous heritage significance. This is consistent with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* prepared by the former Department of Environment, Climate Change and Water in 2010.
2.4 Recreation Vehicle Areas	Yes	*Sensitive land or land with significant conservation values should be protected from adverse impacts from recreation vehicles*	Consistent: No recreation vehicle areas are proposed.
3. Housing, Infrastructure and Urban Development			
3.1 Residential Zones	Yes	*A variety and choice of housing types to provide for existing and future housing needs is encouraged, as well as making efficient use of and providing access to existing infrastructure and services, and minimising the impact of residential development on the environment and resources*	Consistent: The Planning Proposal provides for further low density residential subdivision development and future development of the Land would need to be consistent with the 'objectives' of the R2 Low Density Residential Zone – • *To provide for the housing needs of the community within a low density residential environment.* • *To enable other land uses that provide facilities or services to meet the day to day needs of residents*
3.2 Caravan Parks and Manufactured Home Estates	Yes	*Providing for a variety of housing types and opportunities for caravan parks and manufactured home estates is encouraged*	Consistent: The Land does not contain any existing caravan parks or manufactured home estates and the Planning Proposal does not derogate the objective of this Direction.
3.3 Home Occupations	Yes	*The carrying out of low-impact small businesses in dwelling houses is encouraged*	Consistent: The LEP already allows "home occupation" in the R2 Low Density Residential Zone without the need for development consent.
3.4 Integrating Land Use and Transport	Yes	*Ensuring that residential land has access to the existing road and cycle networks is encouraged so as to facilitate access to jobs and services by walking, cycling and public transport, and thereby reduce dependence on cars and reduce travel demand including the number of trips generated and the distances travelled, especially by car*	Consistent: The Land has access to the local road network to Wagga Road.
4. Hazard and Risk			
4.4 Planning for Bushfire Protection	Yes	*A planning proposal must have regard to the Planning for Bushfire Protection Guidelines 2006*	Consistent: A Bush Fire Assessment was completed under DA 10.2012.32005.2 for the Land in accordance with sections 100B(1)(a)

Local Planning Directions	Applicable?	Requirement	Consistency? (consistent; justifiably inconsistent; inconsistent)
			and 100B(4) of the Rural Fires Act 1997 (the RF Act), clause 44 of the Rural Fires Regulation 2008 (the RF Regs), and Appendix 4 of Planning for Bush Protection 2006 (PBP). A Bushfire Safety Authority under section 100B of the RF Act was issued. The Planning Proposal does not alter the terms of the Bushfire Safety Authority including the provision of Asset Protection Zones.
5. Regional Planning			
5.1 Implementation of Regional Strategies	Yes		Consistent: The *Draft Murray Regional Strategy 2009* is not relevant to this Direction.
5.10 Implementation of Regional Plans	Yes	*Planning proposals must be consistent with a Regional Plan in terms of vision, land use strategy, goals, directions and actions*	Consistent: The Planning Proposal is consistent with the *Riverina Murray Regional Plan 2036* as set out in **Appendix C: Applicable goals and directions of the *Riverina Murray Regional Plan 2036***.
6. Local Plan Making			
6.1 Approval and Referral Requirements	Yes	*LEP provisions should encourage the efficient and appropriate assessment of development*	Consistent: The Planning Proposal only proposes Minimum Lot Size mapping changes.
6.2 Reserving Land for Public Purposes	Yes	*A planning proposal must not create, alter or reduce existing zonings or reservations of land for public purposes*	This Planning Proposal does not create, alter or reduce and zonings or reservations of public land for public purposes.
6.3 Site Specific Provisions	Yes	*Unnecessarily restrictive site specific planning controls are discouraged*	Consistent: The Planning Proposal only proposes Minimum Lot Size mapping changes.

APPENDIX I:

Future concept subdivision plans

ETTAMOGAH RISE
DA PLANS
STAGES 6–9

OVERALL STAGE 2–9 STAGING PLAN

esler & ASSOCIATES

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31 Baker St, Wangaratta
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w: www.eslers.com.au
e: engineering@eslers.com.au

FS520879

AMENDMENTS\ACTIONS:–	DATE:
1. STAGE 6–12 (REVISION P)	27/11/18
2. STAGE 6–9 (REVISION Q)	11/12/18
3. BLUEPRINT COMMENTS ACTIONED	13/05/19
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EX CONDITIONS SURVEY SOURCE:–	DATE:
1. ESLER & ASSOCIATES	07/07/10
2. STAGE 4 EXISTING SURFACE	27/11/18
3.	
AERIAL PHOTOGRAPHY SOURCE:–	DATE:
1. NEARMAP.COM	17/04/11
2. NEARMAP.COM	10/12/18
3.	

DIMENSIONS AND AREAS ARE SUBJECT TO TOWN PLANNING APPROVAL, CIVIL ENGINEERING DESIGN AND LAND SURVEY

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SHEET 1 OF 9 A1

STAGE	min 4,000sq.m ALLOTMENTS	min 1,500sq.m ALLOTMENTS	TOTAL ALLOTMENTS
1–3	18	132	150
4.	0	42	42
5.	0	42	42
6.	26	19	45
7.	22	22	44
8.	16	43	59
9.	17	14	31
	99	314	413

ROAD RESERVE DETAIL

- 13m ROAD RESERVE
  3.5m NATURESTRIP
  6m INVERT–INVERT
- 19m ROAD RESERVE
  5.5m NATURESTRIP
  8m INVERT–INVERT
- 22m ROAD RESERVE
  5.5m NATURESTRIP
  11m INVERT–INVERT
- 26m ROAD RESERVE
  4.5m NATURESTRIP
  2*6.6m INVERT–INVERT
  3.8m MEDIUM STRIP

CENTRAL RESERVE ROAD
GEROGERY ROAD
WAGGA ROAD
THIMBLE CRT
CANNON CRT
FENCHURCH AVE
CHANGE CRT
FLEET CRT
STAGE 8
STAGE 5
KENT ST
TRAFALGAR ST
LANTERN CRT
PENTONVILLE ST
STRAND TERRACE
BASIN(D)
LIVERPOOL AVE
STAGE 9
DARROW ST
BASIN(E)
STAGE 4
COVENTRY ST
BASIN(C)
PARK
STRAND TERRACE
FENCHURCH AVE
WHITEHALL AVE
BOND ST
STAGE 7
EUSTON ST
BASIN(B)
MARYLEBONE AVE
BOW CRT
WINDSOR AVE
PICADILLY ST
REGENT ST
WHITEHALL AVE
WATER RESERVOIR
LEICESTER ST
BASIN(A)
GREAT SOUTHERN RAILWAY
HUME HIGHWAY
STAGE 6
BASIN(F)
WHITEHALL AVE
WHITEHALL AVE
FENCHURCH AVE
STAGE 6
MARLBOROUGH ST
MARLBOROUGH ST
MUNIONG

N
W E
S

H30 0 60 120 180
BAR SCALE

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DATE PLOTTED:– Tuesday, May 14, 2019

DOC19/144325

ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 4

esler & ASSOCIATES

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SHEET 2 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N W E S

FLEET CRT
PENTONVILLE ST
KENT ST
LIVERPOOL AVE
STRAND TERRACE
COVENTRY ST
FENCHURCH AVE
STRAND TERRACE

417 1751sq.m
416 1580sq.m
415 1519sq.m
414 1525sq.m
413 1512sq.m
411 1844sq.m
412 1513sq.m
418 1507sq.m
419 1507sq.m
420 1507sq.m
421 1507sq.m
422 1507sq.m
423 1523sq.m
424 1691sq.m
425 1905sq.m
426 1507sq.m
427 1507sq.m
428 1507sq.m
429 1507sq.m
430 1507sq.m
431 1507sq.m
432 1507sq.m
433 1507sq.m
434 1512sq.m
435 1513sq.m
436 1513sq.m
437 1513sq.m
438 1512sq.m
439 1512sq.m
440 1513sq.m
441 1513sq.m
442 1513sq.m
443 BASIN 3790sq.m
401 1502sq.m
402 1508sq.m
403 1503sq.m
404 1503sq.m
405 1521sq.m
406 1516sq.m
407 1588sq.m
408 1548sq.m
409 1535sq.m
410 1509sq.m
329 1538sq.m
328 1505sq.m
327 1532sq.m
326 1543sq.m
325 1499sq.m
324 1502sq.m
323 1511sq.m
322 1927sq.m
321 1617sq.m
320 1523sq.m
319 1503sq.m
318 1505sq.m
317 1507sq.m
316 1509sq.m
315 1511sq.m
314 1514sq.m
313 1524sq.m
312 1502sq.m
311 1505sq.m
310 1505sq.m
309
330 4052sq.m
PARK LAND 354 4010sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 5

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SHEET 3 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N W E S

CENTRAL RESERVE ROAD
GEROGERY ROAD
THIMBLE CRT
CANNON CRT
FENCHURCH AVE
FLEET CRT
PENTONVILLE ST
KENT ST
LIVERPOOL AVE
STRAND TERRACE
ROW ST

521 1632sq.m
520 2160sq.m
519 1576sq.m
518 1461sq.m
517 1501sq.m
516 1501sq.m
515 1503sq.m
508 1522sq.m
509 1709sq.m
510 1502sq.m
511 1501sq.m
512 1501sq.m
513 1502sq.m
514 1504sq.m
507 1506sq.m
506 1515sq.m
505 1513sq.m
504 1513sq.m
503 1513sq.m
502 1513sq.m
501 1512sq.m
522 1566sq.m
523 1521sq.m
524 1520sq.m
525 1508sq.m
526 1812sq.m
527 2260sq.m
528 1943sq.m
529 1522sq.m
530 1517sq.m
531 1751sq.m
532 1631sq.m
533 1523sq.m
534 1512sq.m
535 1512sq.m
536 1503sq.m
537 1512sq.m
538 1512sq.m
539 1513sq.m
540 1503sq.m
541 1503sq.m
542 1513sq.m
543 BASIN 5103sq.m
417 1751sq.m
416 1580sq.m
415 1519sq.m
414 1525sq.m
413 1512sq.m
433 1507sq.m
432 1507sq.m
431 1507sq.m
430 1507sq.m
429 1507sq.m
428 1507sq.m
427 1507sq.m
434 1512sq.m
435 1513sq.m
436 1513sq.m
437 1513sq.m
438 1512sq.m
439 1512sq.m
440 1513sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 6

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BSI FS520879

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SHEET 4 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N
W E
S

BOW CRT
PICADILLY ST
WHITEHALL AVE
MARLBOROUGH ST
FENCHURCH AVE

WATER RESERVOIR

EXISTING WATER/DRAINAGE EASEMENT FOR REMOVAL
EXISTING WATERMAIN EASEMENT
EXISTING OVERHEAD ELECTRICAL CABLE AND POLES INCLUDING EASEMENT FOR REMOVAL
DRAINAGE RESERVE 1409sq.m

605 2641sq.m
606 2427sq.m
607 2269sq.m
608 2111sq.m
609 2214sq.m
610 2169sq.m
611 2182sq.m
612 2139sq.m
613 2264sq.m
614 2252sq.m
615 4618sq.m
616 4125sq.m
617 5892sq.m
618 4190sq.m
619 4059sq.m
620 4004sq.m
621 5022sq.m
622 2545sq.m
623 2736sq.m
624 2604sq.m
625 2610sq.m
626 2615sq.m
627 2873sq.m
628 2762sq.m
629 2652sq.m
630 2551sq.m
631 4819sq.m
632 4463sq.m
633 4091sq.m
634 4099sq.m
635 4304sq.m
636 4035sq.m
637 4085sq.m
638 4099sq.m
647 BASIN 4317sq.m
601 4072sq.m
602 4027sq.m
603 4051sq.m
604 4142sq.m
67 4012sq.m
68 4063sq.m
69 4057sq.m
70 4025sq.m
65 1509sq.m
66 1511sq.m
88 1501sq.m
89 1502sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6-9

LAYOUT PLAN
STAGE 6

esler & ASSOCIATES

SURVEYORS CIVIL ENGINEERS
DEVELOPMENT CONSULTANTS

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p: (02) 6021-1322
64 Hammond Avenue, Wagga Wagga
p: (02) 6921-3312
31 Baker St, Wangaratta
p: (03) 5721-5688
f: (02) 6021-8563
w: www.eslers.com.au
e: engineering@eslers.com.au

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AMENDMENTS\ACTIONS:-	DATE:
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CHECKED:-

APPROVED:-

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A.H.D	DSJ	NOV-2018

PROJECT No: 00016917 **REV: Q**

SHEET 5 OF 9 A1

H-10 0 20 40 60
SCALE 1:1000 @ A1

N E S W

WHITEHALL AVE
FENCHURCH AVE
MARLBOROUGH ST
MUNIONG

EXISTING OVERHEAD ELECTRICAL CABLE AND POLES INCLUDING EASEMENT FOR REMOVAL

EXISTING WATERMAIN EASEMENT

EXISTING WATERMAIN EASEMENT

646 DRAINAGE RESERVE 1409sq.m

647 BASIN 4317sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 7

esler & ASSOCIATES

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DEVELOPMENT CONSULTANTS

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PROJECT No: 00016917 **REV: Q**

SHEET 6 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N W E S

BOND ST
BOND ST
EXISTING RIGHT OF WAY EASEMENT FOR REMOVAL
BOW CRT
MARYLEBONE AVE
PICADILLY ST
FENCHURCH AVE
EXISTING WATER/DRAINAGE EASEMENT FOR REMOVAL
WATER RESERVOIR

720 4292sq.m
721 4129sq.m
722 4150sq.m
723 4150sq.m
724 2795sq.m
725 2789sq.m
726 2408sq.m
727 2274sq.m
728 2270sq.m
729 2218sq.m
730 3580sq.m
731 2461sq.m
732 2486sq.m
733 2490sq.m
734 4150sq.m
735 4118sq.m
736 5037sq.m
737 4884sq.m
738 6007sq.m
739 4118sq.m
740 5863sq.m
741 6339sq.m
742 2407sq.m
743 2424sq.m
744 2340sq.m
330 4052sq.m
331 4025sq.m
332 4054sq.m
333 4290sq.m
334 4312sq.m
43 4023sq.m
719 4088sq.m
718 4220sq.m
717 4290sq.m
716 4159sq.m
715 4037sq.m
714 4051sq.m
713 4286sq.m
712 2296sq.m
711 2283sq.m
710 2217sq.m
709 2058sq.m
708 2144sq.m
707 2144sq.m
706 4172sq.m
705 4143sq.m
704 5484sq.m
703 2273sq.m
702 2195sq.m
701 2311sq.m
605 2641sq.m
606 2427sq.m
607 2269sq.m
608 2111sq.m
609 2214sq.m
610 2169sq.m
611 2182sq.m
602 4027sq.m
603 4051sq.m
604 4142sq.m
70 4025sq.m
71 1502sq.m
72 1501sq.m
73 1502sq
86 1502sq.m
47 4018sq.m
48 4000sq.m
49 4002sq.m
17 1520sq.m
18 1742sq.m
45 4000sq.
46 4004sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 8

esler & ASSOCIATES

SURVEYORS CIVIL ENGINEERS
DEVELOPMENT CONSULTANTS

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PROJECT No: 00016917 **REV: Q**

SHEET 7 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N W E S

CANNON CRT
FENCHURCH AVE
CHANCE CRT
FLEET CRT
TRAFALGAR ST
LANTERN CRT
PENTONVILLE ST
DARROW ST
LIVERPOOL AVE
COVENTRY
STRAND TERR

813 4034sq.m
814 4026sq.m
815 4023sq.m
816 4049sq.m
817 5108sq.m
818 4609sq.m
820 4081sq.m
822 4112sq.m
823 4029sq.m
824 4034sq.m
836 1505sq.m
837 1520sq.m
838 1523sq.m
839 1522sq.m
840 1507sq.m
841 1510sq.m
842 1507sq.m
843 1520sq.m
844 1550sq.m
845 1584sq.m
846 1513sq.m
847 1520sq.m
848 1540sq.m
849 1536sq.m
850 1520sq.m
851 1515sq.m
852 1515sq.m
521 1632sq.m
522 1566sq.m
523 1521sq.m
524 1520sq.m
525 1508sq.m
526 1812sq.m
527 2260sq.m
528 1943sq.m
529 1522sq.m
530 1517sq.m
531 1751sq.m
532 1631sq.m
533 1523sq.m
534 1512sq.m
535 1512sq.m
536 1503sq.m
520 2160sq.m
519 1576sq.m
518 1461sq.r
517 1501sq.r
516 1501sq.r
515 1503sq.r
540 1503sq.r
539 1513sq.r
538 1512sq.r
537 1512sq.
418 1507sq.
419 1507sq.
420 1507sq.
421 1507sq.
422 1507sq.
423 1523sq.r
812 1540sq.m
811 1652sq.m
810 1602sq.m
809 1643sq.m
808 1634sq.m
807 1736sq.m
806 1700sq.m
805 1564sq.m
804 1619sq.m
803 1880sq.m
802 1945sq.m
801 2150sq.m
855 2375sq.m
854 1601sq.m
853 1601sq.m
856 1781sq.m
857 1603sq.m
858 1536sq.m
859 1519sq.m
860 1550sq.m
417 1751sq.m
416 1580sq.m
415 1519sq.m
414 1525sq.m
413 1512sq.m
412 1513sq.m
411 1544sq.m
409 1535sq.m
408 1548sq.m
407 1588sq.m
406 1516sq.m
410 1509sq.m
329 1538sq.m
328 1505sq.m
327 1532sq.m
326 1543sq.m
PARK LAND

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 8

esler & ASSOCIATES

SURVEYORS CIVIL ENGINEERS
DEVELOPMENT CONSULTANTS

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PROJECT No: 00016917 **REV: Q**

SHEET 8 OF 9 A1

H–10 0 20 40 60
SCALE 1:1000 @ A1

N
W E
S

CENTRAL RESERVE ROAD
THIMBLE CRT
FENCHURCH AVE
CANNON CRT
CHANGE CRT
FLEET CRT
LANTERN CRT
PENTONVILLE ST
KENT ST
STRAND TERRACE
FENCHURCH AVE

826 8790sq.m
827 4144sq.m
828 4018sq.m
825 4036sq.m
821 4584sq.m
822 4112sq.m
824 4034sq.m
823 4029sq.m
829 1553sq.m
830 1501sq.m
831 1502sq.m
832 1658sq.m
833 18.14sq
836 1505sq.m
837 1520sq.m
838 1523sq.m
835 1534sq.m
839 1522sq.m
834 1507sq.m
817 5108sq.m
820 4081sq.m
819 4052sq.m
816 4049sq.m
818 4609sq.m
840 1507sq.m
841 1510sq.m
842 1507sq.m
843 1520sq.m
844 1550sq.m
845 1584sq.m
846 1513sq.m
847 1520sq.m
848 1540sq.m
849 1536sq.m
815 4023sq.m
814 4026sq.m
813 4034sq.m
812 1540sq.m
811 1652sq.m
810 1602sq.m
809 1643sq.m
850 1520sq.m
851 1515sq.m
852 1515sq.m
853 1601sq.m
854 1601sq.m
855 2375sq.m
856 1781sq.m
857
521 1632sq.m
520 2160sq.m
522 1566sq.m
523 1521sq.m
524 1520sq.m
525 1508sq.m
526 1812sq.m
527 2260sq.m
528 1943sq.m
529 1522sq.m
530 1517sq.m
533 1523sq.m
532 1631sq.m
531 1751sq.m
534 1512sq.m
535 1512sq.m
536 1503sq.m
417 1751sq.m
416
508 1522sq.m
509 1709sq.m
519 1576sq.m
510 1502sq.m
518 1461sq.m
511 1501sq.m
517 1501sq.m
512 1501sq.m
516 1501sq.m
513 1502sq.m
515 1503sq.m
514 1504sq.m
540 1503sq.m
541 1503sq.m
539 1513sq.m
542 1513sq.m
538 1512sq.m
433 1507sq.m
537 1512sq.m
432 1507sq.m
418 1507sq.m
431 1507sq.m
507 1506sq.m
506 1515sq.m
505 1513sq.m
504 1513sq.m
503 1513sq.m
502 1513sq.m
501 1512sq.m
543 BASIN 5103sq.m
434 1512sq.m
435 1513sq.m
436 1513sq.m

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ETTAMOGAH RISE
DA PLANS
STAGES 6–9

LAYOUT PLAN
STAGE 9

esler & ASSOCIATES

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DEVELOPMENT CONSULTANTS

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SHEET 9 OF 9 A1

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H–10 0 20 40 60
SCALE 1:1000 @ A1

N W E S

CHANCE CRT
CANNON CRT
FLEET C
TRAFALGAR ST
LANTERN CRT
PENTONVIL
FENCHURCH AVE
DARROW ST
H AVE

817 5108sq.m
820 4081sq.m
823 4029sq.m
819 4052sq.m
816 4049sq.m
818 4609sq.m
815 4023sq.m
814 4026sq.m
841 1510sq.m
842 1507sq.m
843 1520sq.m
524 1520sq.m
844 1550sq.m
525 1508sq.m
845 1584sq.m
526 1812sq.m
846 1513sq.m
527 2260sq.m
528 1943sq
847 1520sq.m
813 4034sq.m
848 1540sq.m
849 1536sq.m
850 1520sq.m
851 1515sq.m
852 1515sq.m
533 1523sq.m
812 1540sq.m
811 1652sq.m
855 2375sq.m
854 1601sq.m
853 1601sq.m
534 1512sq.m
810 1602sq.m
809 1643sq.m
856 1781sq.m
857 1603sq.m
858 1536sq.m
859 1519sq.m
808 1634sq.m
807 1736sq.m
806 1700sq.m
805 1564sq.m
804 1619sq.m
803 1880sq.m
802 1945sq.m
801 2150sq.m
313 1524sq.m

925 4103sq.m
926 4018sq.m
924 4141sq.m
927 4057sq.m
923 3541sq.m
928 4056sq.m
922 4580sq.m
929 4029sq.m
930 4093sq.m
931 4115sq.m
932 BASIN 4040sq.m
921 2218sq.m
920 2547sq.m
919 2599sq.m
918 2003sq.m
914 1952sq.m
915 1952sq.m
916 1952sq.m
917 2969sq.m
913 2152sq.m
912 2162sq.m
911 2172sq.m
910 3283sq.m
909 3259sq.m
908 2532sq.m
907 4415sq.m
906 4071sq.m
905 5146sq.m
904 4081sq.m
903 4183sq.m
902 4017sq.m
901 4008sq.m

PARK LAND 354 4010sq.m

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